From VISION To ACTION

Michigan.gov

"Information technology is playing
a critical role in every aspect of our work.
Whether it's helping us work with local governments
and the private sector to improve efficiencies or
helping us create jobs through economic development
initiatives, information technology is at the heart
of Michigan's state government."

Jennifer M. Granholm, Governor

From VISION To ACTION

STATE OF MICHIGAN

OFFICE OF THE GOVERNOR

LANSING

JENNIFER M. GRANHOLM
GOVERNOR

JOHN D. CHERRY, JR.
LT. GOVERNOR

In Michigan, we are using information technology (IT) everyday to provide better service, save dollars, create an efficient state government and also as a tool for collaboration. And we see the results everyday, too.

Our online tools allow citizens to access a world of information, from creative after-school activities for their children to smoking cessation programs. Entrepreneurs and companies looking to invest in Michigan can use our Website to find qualified employees, apply for and track needed permits or get information on how to start, grow and finance a new business in Michigan. In all, we offer electronic access to some 40 services online.

In Michigan, technology is about more than streamlining government. It also helps us protect citizens. Law enforcement and first responders in Michigan communicate over a secure, reliable radio system available that's accessible anywhere in the state.

We are proud of our high-tech transformation. And now, we are setting out to do even more, using IT to address our economic and budget challenges, provide the best possible services to our citizens and the safest communities for our families.

The 2006 IT Strategic Plan builds upon our previous initiatives and focuses on improving IT services in relation to our six priority areas: education, health and human services, hometown security, the economy, better government and the environment. This document outlines how we plan to move forward. And it also draws on our shared values of integrity, inclusion, teamwork and, of course, excellence.

Excellence is our goal in government and IT is one of the best tools we have to reach the summit of our potential as we seek to educate our children, protect our families and grow our economy. I look forward to putting our 2006 IT Strategic Plan to work for Michigan citizens.

Sincerely,

Jennifer M. Granholm
Governor

TABLE OF CONTENTS

A VISION OF ACTION

A Message from Michigan CIO Teri Takai

> "Think like a business: we must compete or be left in the dust by other states and countries."
>
> *Governor Jennifer Granholm - State of the State Address - Feb. 8, 2005*

Director Teri Takai
State of Michigan CIO
Michigan IT Strategic Plan

Coming into office, Governor Jennifer Granholm challenged state government to rethink its role in taking Michigan into the 21st century. Not as a state struggling to turn around its economy, but as a leader that meets the tests of our time.

Our "test," as charged by Governor Granholm, was to use technology to infuse efficiency within state government. We not only passed the test but are now taking on new challenges. In our third year of strategic planning, we are using technology as the enabler - and solution - to improve the quality of life for our citizens and to attract business and good paying jobs.

Whether it is providing a one-stop call center for citizens to access state services quickly and securely or giving state employees collaboration tools like real-time online meetings to cut down on travel time and cost, we are investigating the best ways to deliver on our vision of "A Connected Michigan" - where access is just a click away, where services are streamlined and secure, and where citizens have an immediate voice in an open and energetic public square.

State of Michigan Goals

Education
Improve student achievement

The Economy
Sustain and create business investment and jobs in Michigan

Hometown Security
Protect our citizens and make Michigan's communities safer

Health and Human Services
Make Michigan's people healthier and our families stronger

Better Government
Make government in Michigan more cost effective and efficient

The Environment
Enhance the quality of Michigan's natural environment

The governor's six priority areas serve as the foundation for Michigan's Information Technology (IT) Strategic Plan: education, the economy, hometown security, health and human services, better government and the environment. The plan presents actionable steps that drive how the Michigan Department of Information Technology (MDIT) manages and delivers the state's IT resources.

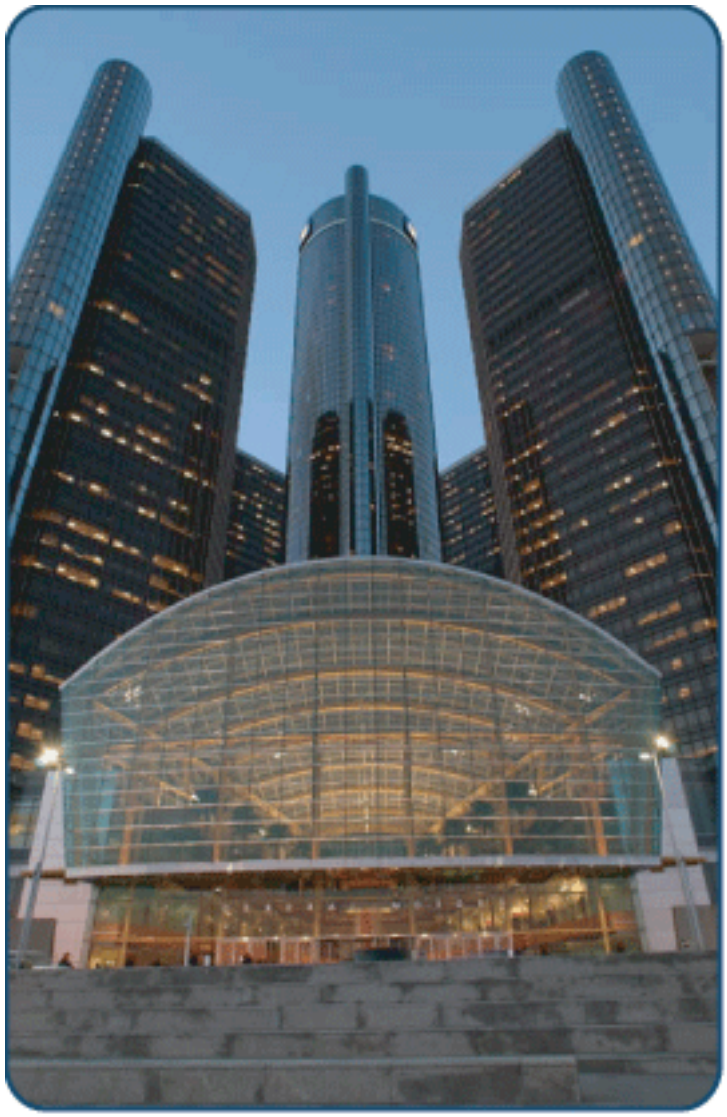
The strategic planning process begins with the Cabinet Action Plan, which defines the governor's highest priority commitments to the citizens of Michigan and the actions and outcomes for which each state agency is responsible in order to meet those commitments.

It also involves a budgeting approach that focuses on preserving and protecting the services identified as most important to the state's citizens. And it concludes with an examination of what government, constituent and technology trends are coming our

way to help determine which tools and expertise are needed to enable the state to deliver solutions to meet its customers' needs. You can read more about our strategic planning process in Appendix A.

The previous Strategic Plan set forth a plan of action to address the issues facing us. This document updates that plan and sets forth additional initiatives and emerging directions. Those initiatives and directions focus on growing Michigan's economy while ensuring we are ready for global changes that drive the way the state and our citizens do business.

Let me share with you the progress we have made and how we will make our vision of "A Connected Michigan" a reality.



VISION

A connected Michigan where access is just a click away, where services are streamlined and secure, and where citizens have an immediate voice in an open and energetic public square

Our vision of "A Connected Michigan" is more than words on paper. It is a commitment to taking specific steps to realize our potential and better our citizens' lives.

Our vision was formed by listening to the state's stakeholders. It guides the series of actions that drive how the Michigan Department of Information Technology manages and delivers the state's IT resources. It determines the tools and expertise needed to enable the state to deliver solutions that meet its customers' needs.

The following vignettes illustrate what is possible - helping us keep stretching for improvement and take us further into the future. A future where Michigan citizens and businesses can thrive.

A Connected Michigan

Michigan's IT Future

Education

Maria Sanchez is completing her last year in high school. Her family did not have the discretionary income to purchase a computer, but her school participated in a partnership that provided surplus state computers to targeted users. Although at home sick, Maria participated with her class in an interactive, online collaboration with a class in Mexico to do a research project on Mayan buildings. Using digital video images taken during a virtual field trip at Palenque with their Mexican classmates, Maria's class used an image-based library database to retrieve articles from libraries worldwide and provide English translations in real time. Maria's teacher monitored Maria's report writing and presentation using an embedded virtual assistant teacher in the collaboration tool and provided personalized, private instruction on difficult translation issues. Maria used the state's one-stop education portal to submit her college and financial aid applications to the Michigan schools she is interested in attending and was able to attach her transcripts from the three high schools she attended.

The Economy

Ruth Johnson's technology company is expanding, and she wants to recruit qualified professional employees. Using the Michigan Talent Bank, she has identified potential employees local to her home base and found student interns to help energize her business. She has identified the job skills needed to satisfy a contract to begin in six months and worked with the state and its university partners to obtain re-training needed for her staff. The university partners deliver training modules direct to her staff's mobile, handheld broadband equipment for self-directed learning. She can conduct meetings to discuss grant opportunities online with state and local officials which are digitally recorded, accessible and searchable from her office. Her accountant is authorized to send and receive messages through an integrated, cross-jurisdictional tax portal allowing him to view all state and local accounts and make payment online through the state's portal.

The History of Information Technology in Michigan

1994 Implemented a Statewide financial management system tied to purchasing: MAIN

1994 Initiated a state-wide end-user computing contract for PCs

1996 Consolidated all Michigan IP networks

1996 Implemented Michigan's first enterprise data warehouse

1997 Completed consolidation of mainframes in Michigan's first centralized data center

1997 Creation of the IT Project Management Office

1999 First Michigan Information Technology Strategic Plan

1999 Implemented the state-managed online job search engine: Michigan Talent Bank

2000 Creation of e-Michigan and Michigan.gov

2000 First self-service transaction online: hunting and fishing licenses

A Connected Michigan

Michigan's IT Future

Health and Human Services

The progression of her Alzheimer's disease has left Margaret Owens unable to communicate and make decisions for her care. She lives in a skilled nursing facility in Benton Harbor, but her daughter, who is her legal representative, lives in the Upper Peninsula. Using video-conferencing, her television allows her to participate in patient care conferences with her mother's doctor and nursing team, and she has split-screen access to her mother's medical record. Using mobile and push technology, the Department of Community Health field worker can complete, file and e-mail Mrs. Owens' daughter their licensing inspection report of the facility. The doctor's prescriptions are bar-coded and with one click are sent to the pharmacy, to her mother's care record, and to Medicaid for payment.

Hometown Security

Witnesses saw a blue Chevy pickup leaving a Cadillac chemical plant just before an explosion. The state's interoperable communications system gives first responders linked a two-way radio, a cellular phone and a data terminal in a small, hand-held device. Local fire personnel identified chemicals in storage onsite using a link to the state's environmental management database, and a message has been broadcast over telephone and television channels to evacuate residents within one mile of the facility. Michigan State Police troopers stopped a blue pickup truck for speeding which matches the description. Using their portable iris-scanning tool and linking to national and international police databases, the state troopers positively identify the driver as a terrorist from Germany wanted in connection with a bombing in that country.

2001
On October 14, MDIT and the first cabinet-level CIO were created by executive order

2001
Consolidation of all geographic information systems resources into the Center for Geographic Information (CGI)

2001
Statewide human resources application implemented

2002
MDIT centralized all executive branch IT assets and resources

2003
Completed Organizational Transformation Initiative:
- Consolidation of all helpdesks
- Process and service delivery development
- Governance and service level agreements

2003
Creation of Office of Technology Partnerships

2003
Development of the Governor's statewide business plan

2004
First permit issued online through the Michigan Timely Applications and Permit Service portal (Mi-TAPS)

2004
First statewide Michigan Information Technology Strategic Plan - Integrated with the Governor's business plan

2004
Centralized management of statewide emergency radio system

2002
Creation of Chief Security Officer position

2003
Creation of MITEC

2003
Implemented interactive voice response (IVR) system for all unemployment claims:
- Remote initial claims centers (RICC)

A Connected Michigan

Michigan's IT Future

Better Government

Thomas and JoAnne Jay make extensive use of the state's tourism portal. Planning a trip to the Leelanau Peninsula, they view a 3-D virtual reality walk through the Leland harbor area and the stores along the street. They realize that they had found their dream location to live. Using a wireless handheld device, they use the state's enterprise contact center via the state's Web portal to identify and link to local communities for information on real estate, services, and taxes, along with bed and breakfast businesses for sale. The center links their phone number and e-mail address to their inquiry and sends them updates on the information they request. Six months later they advertise their new business on the state's tourism web site.

Environment

William Turner is considering adding new crops and perhaps raising water buffalo for production of boutique mozzarella cheese. Linking with the state's Department of Agriculture, he can view lectures by Michigan State University professors on the best crops for Michigan's climate and how to prevent his herd from polluting the protected trout stream on his property. William can download edited content on small business development to his MP3 player and listen to it in his car on the way to picking up his daughters from school. Querying the Department of Environmental Quality, he is able to download all applicable permitting information - not only for DEQ, but also the state and local health departments relating to food services.

2005 MI-HR self-service tool implemented for all three branches of government human resources

2005 Secretary of State implemented 24x7 self-service stations at select branch offices

2005 Implemented Single Business Tax (SBT) electronic filing

2006 Formal enterprise architecture plan developed

2006 Go live with an agency conversion to a common directory design and office platform

2006 Consolidation of state e-mail systems

2006 Develop enterprise data warehouse strategy

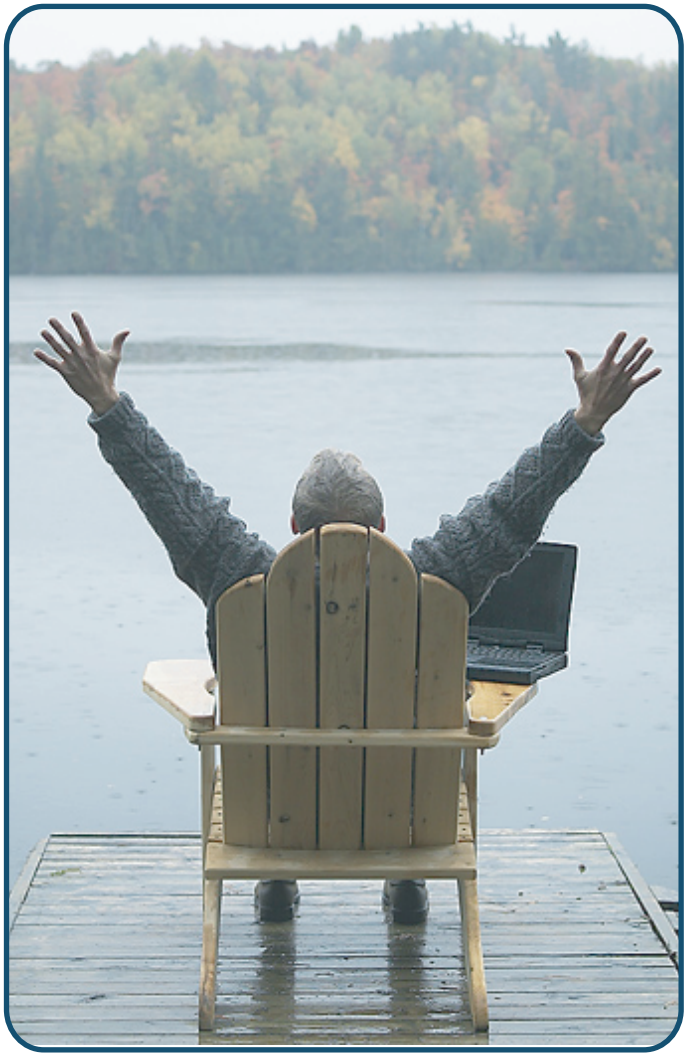
2006 First data transfer across statewide emergency radio system

2007 Expected completion of K-20 data warehouse

2008 Completion of statewide Medicaid system upgrade

2009 Integrated Eligibility System for Human Services

2010 Business Application Modernization program integrating driver, motor vehicle and voter registration processing



Action

Access to Michigan government has never been easier. Michigan has been ranked number one in the country when it comes to digital government. We have to keep pushing to be the very best.

Teri Takai, State of Michigan CIO

Realizing the vision of technology in government set forth in the vignettes on the previous pages requires a plan of action. This plan of action must address multiple shared cross-governmental themes, including:

- Ensure accountability, security, and trust with no breaches of personal information.
- Provide citizens access to services and employees, when ever and where ever needed.
- Provide incentives and eliminate barriers to shared resources, solutions, and services among public and private sector partners.
- Develop a flexible, cross-boundary, and future-oriented enterprise and shared architecture.
- Develop a non-duplicative infrastructure, both within government and shared with partners.
- Strengthen and invest in the workforce and workplace.
- Develop and implement just-in-time IT solutions, in anticipation of challenges as well as opportunities.
- Develop a funding model and processes, consistent with the budgeting process, maximizing service opportunities and gaining efficiencies from innovations.
- Support and enhance current public policy and service priorities while using technology to transform government capabilities.

The goal structure, future technology solutions, and infusion strategies in the remainder of this strategic plan chart the actions Michigan will take to turn vision into reality.

turning VISION into ACTION

Michigan IT Goals

turning VISION into ACTION

Michigan is proceeding with its plan of action. The following pages highlight the initiatives representative of efforts Michigan is undertaking during this planning cycle. For detailed information on any of Michigan's strategic IT initiatives and how success is measured, see Appendix B and Appendix C.

Getting to these actionable steps required strategic planning and an assessment of the state's current and emerging needs, as well as foreseeing future needs. To do this, MDIT worked with the Michigan Information Technology Executive Council (MITEC) and the state's IT leadership (see Appendix D). Together, these partners have determined to invest in the state's foundation and pursue technology solutions to find efficiency and provide better services to Michigan's citizens.

The five goals for the state's technology plan are:

Goal 1 Expand Michigan's services to reach anyone, at anytime, from anywhere.

Goal 2 Transform Michigan's services through sharing and collaboration.

Goal 3 Manage technology to provide better service and faster delivery.

Goal 4 Make Michigan a "Great Workplace" and the employer of choice for technology professionals.

Goal 5 Create a statewide community of partnerships.

In Michigan, IT is more than a tool. It is a driver to innovation. Innovation that is key to the state's evolution and success in reaching these goals.

Access | Collaboration | Efficiency | Great Workplace | Partnerships





GOALS

GOAL ONE

Expand Michigan's services to reach anyone, at anytime, from anywhere.

Goal Description

Provide secure access to government services to anyone at anytime from anywhere. Expanding access is more than running additional communication lines. It means connecting our state by increasing our technical capabilities and expanding the number of online services Michigan delivers to its citizens, securely and in a manner that protects the privacy of every citizen.

Strategies	Targets and Metrics
Provide Michigan customers one simple access point to government services	Improve customer satisfaction of Michigan self-service Double the number of transactional based self-services in the next 18 months Double the adoption rate of electronic self-service channels in the next 18 months Develop plan to provide a multi-channel, single access point to state government self-services by 2008
Secure State of Michigan's systems and data and the privacy of personal data	Ensure that all servers are current with security patches and compliant with security policy Implement Identity and Access Management solution by 2007
Expand access to government services	Begin two mobile worker pilot programs utilizing wireless technologies in 2006 Broadband services available to all Michigan citizens and business by year-end 2007 90 percent of Michigan residents will utilize online services to conduct business with the State of Michigan in 2007
Leverage and maximize technology	Ensure 100% of mission critical applications have a disaster recovery plan All defined mission critical applications in the hosting centers will have 99.9 percent service availability Implement a rate-driven approach to all technology resources by 2007 Provide a minimum of 512k bandwidth to central office applications in state-managed buildings by 2007 Migrate or eliminate 1,000 servers from the remote data centers through consolidation or centralization by 2008 Internet-protocol-telephony and voice over IP architecture and standards in place in 70 percent of State of Michigan managed buildings by 2010

Connecting the Goal to Action

Representative Initiatives for Goal One*

Self-Service Stations

Approximately 20 customer self-service stations have been installed with more to follow at Secretary of State branch office locations to provide access to a limited number of customer self-service transactions. In the short period of time since deployment, these stations have generated more than 10,000 transactions and demonstrate the demand for self-service by the citizens of Michigan and the need to provide more of this type of access for other services.

Careers in Manufacturing Web Site (www.michigan.gov/mfgcareers)

This new site will support manufacturing careers in Michigan. Various resources for learning about the types of manufacturing, exploring the careers that exist in manufacturing, and for more references and statistics about manufacturing will be available here. Future Web site access supporting economic development in Michigan is currently being reviewed.

Sex Offender Registry (SOR) / Public Sex Offender Registry (PSOR)

In an effort to provide citizens with the most up-to-date information both the SOR and the PSOR are being rewritten to retrieve real-time data from the new Criminal History Record system. These applications have a direct relationship to the National Sex Offender Registry (NSOR). This is just an example of how information can be made available to citizens.

Michigan Talent Bank (Mi-Internship Expansion)

The MI Internship project began in early 2005 to support the Governor's plan to keep and attract students in Michigan by offering them internships with Michigan-based companies and employers. This first phase has identified all Michigan Talent Bank registered employers who have internship information on their Web sites. The next phase adds functionality, allows employers to enter postings for internships, and enables students to search these postings for opportunities.

*See Appendix B for a complete list of initiatives

Michigan Virtual High School

Forty Oak Park High School seniors short an English credit to graduate turned to the Michigan Virtual High School, where they worked with Kristi Bush, an online instructor from Shepherd, and her teaching assistant, Alexandra Kloster from Elk Rapids.

Kristi surprised the students by traveling some 100 miles to attend graduation: "We all worked hard to ensure that the students met the course requirements and earned their final credit. It was all worth it to watch them walk across the stage and graduate with their class.

"That is what online education is all about - the success of Michigan students!"

GOAL TWO

Transform Michigan services through sharing and collaboration

Goal Description

Technology is a powerful tool for transforming government. By connecting with Michigan citizens and stakeholders, we realize that every technology implementation offers an opportunity to question old methods and approaches. Working together, Michigan will find the common ground needed to make positive change and truly share solutions.

Strategies

- Use technology projects as an opportunity to share resources, challenge inefficiency, and re-engineer workflows
- Deliver enterprise solutions

Targets and Metrics

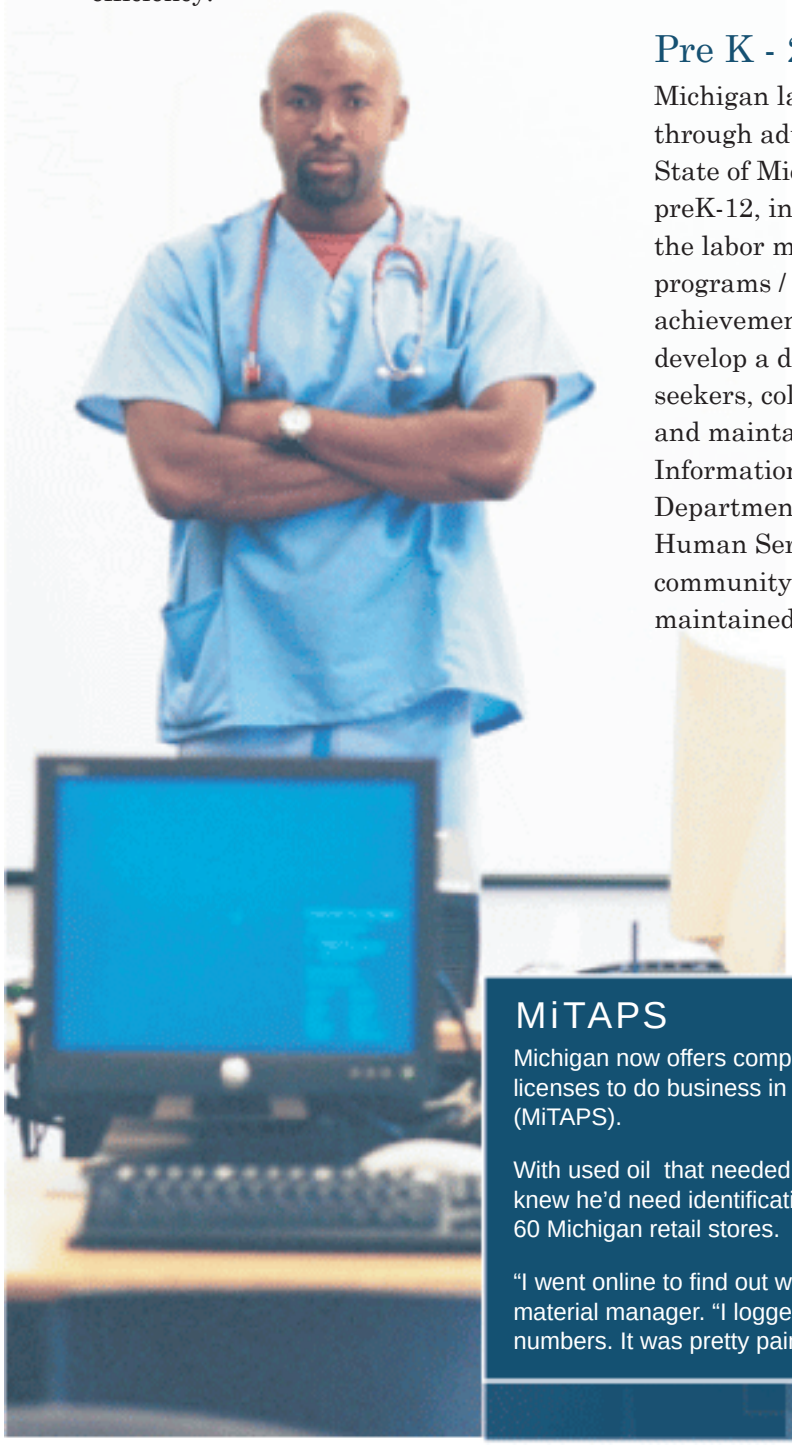
- Establish data warehouse enterprise strategy by first quarter 2006
- Implement an information management strategy to identify what data within the State of Michigan can be leveraged and shared across agencies by year-end 2006
- Implement a privacy framework strategy for enterprise data sharing by 2007
- Work collaboratively with the Michigan Information Technology Executive Council (MITEC) to break down agency business processes and invest in a minimum of two new technology opportunities each year

Connecting the Goal to Action

Representative Initiatives for Goal Two*

Michigan Health Information Network (MHIN)

This application involves both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision-making. This includes such applications as telemedicine and use of the Internet. A central component of MHIN is the electronic health record (EHR), a patient's medical file, which is stored electronically and maintained by a health care provider to order prescriptions and tests, and to inform clinical decisions. Stakeholder forums have been held on MHIN to learn key stakeholders' perspectives on the role of state government in MHIN policy. The state will not develop MHIN solutions itself but rather promote policies to strengthen IT's role in health care improvement and efficiency.



Pre K - 20 Data Warehouse

Michigan lacks a uniform system for tracking children from pre-K through adult learning and into the job market. To remedy this, the State of Michigan will build a system which tracks students from preK-12, into a post secondary/vocational training setting and then into the labor market. This system will allow for targeted study of programs / initiatives, and their impact on improving grade-level achievement, job placement and economic growth. The state will develop a data warehouse to store information about learners and job seekers, collected from a variety of sources including: data collected and maintained by Center for Educational Performance and Information (CEPI); job training participation data maintained by Department of Labor and Economic Growth and Department of Human Services; higher education student data maintained by community college and university systems; and wage record data maintained by the Unemployment Insurance Agency.

e-Procurement

This project will implement a statewide e-procurement system to gain efficiency, integrate best practices and realize overall cost savings throughout the procurement process.

*See Appendix B for a complete list of initiatives

MiTAPS

Michigan now offers companies an online resource to apply and pay for the required permits and licenses to do business in the state: The Michigan Timely Application and Permit Service (MiTAPS).

With used oil that needed to be transported for recycling, Advance Auto Parts' Micah Thompson knew he'd need identification numbers and permits for each of the company's 60 Michigan retail stores.

"I went online to find out what I was supposed to do," said Thompson, a certified hazardous material manager. "I logged on, played with it a little bit, sent the check in and got the site ID numbers. It was pretty painless."

GOAL THREE

Manage technology to provide better service and faster delivery

Goal Description

In these economic times it is more important than ever to be responsible stewards of our limited resources. This means Michigan will do more than deliver projects, but will also deliver value. Managing for effectiveness means exceeding client expectations, meeting commitments, and implementing best practices.

Strategies	Targets and Metrics
Improve service delivery	Implement standard service level agreements (SLAs) and associated metrics and measures in 2006 Cleanse all asset management data and develop business strategy for managing IT assets by year-end 2006
Implement consistent and supportable architecture and standards	Formalize the state's enterprise architecture plan in 2006 Complete a pilot agency conversion to a common directory design, office platform, and consolidated e-mail in 2006 Develop a phased process for implementing published technical standards in 2006 Develop an external advisory council for the sharing of technical services and information throughout Michigan's public and private sectors in 2007 Replace 50 percent of sunset technologies by 2010
Validate Michigan IT investments with business case analysis	Justify 100 percent of all strategic technology initiatives with business case and cost-value analysis by 2006 Standardize enterprise project prioritization and resource allocation processes by 2008
Futuring and long-term planning (connect with stakeholders to plan proactively, innovate, and leverage solutions and infrastructure)	Mature the MDIT Strategy Council through applying the principal of thought leadership and working to determine strategic direction for the organization in 2006
Create a fair, open and competitive procurement process	Meet the target of 40 percent small business participation in staff augmentation Completively bid all commodity and services contracts Meet procurement service levels 95% of the time in 2006

Connecting the Goal to Action

Representative Initiatives for Goal Three*

Michigan/1

Michigan/1 is a vision for the baseline structure of state government's computing environment. It is a statewide effort to consolidate 19 different computing environments into a standardized enterprise framework. By reducing the number of systems supporting basic enterprise computing functions, such as directory services, file and print environments, and desktop environments, costs will be reduced and improved levels of service will be provided to state agencies.

BRIDGES

This effort includes the reengineer and integration of the processes associated with the eligibility determination and case management of Michigan citizens seeking state assistance in human services (food, medical insurance, day care, basic economic needs, etc.) It also includes developing integrated and automated tools that support these processes. When complete, this project will allow State of Michigan caseworkers the ability to be more effective and efficient supporting citizens in need.

Business Application Modernization (BAM)

BAM is a multi-phased project that includes re-engineering the business processes, developing business requirements, designing and eventually building a technical infrastructure to support Department of State (DOS) business. The DOS mission is "to continually improve customer service using innovation and technology. The Department will serve the citizens of Michigan with programs designed to enhance driver safety, protect automotive consumers, and ensure integrity of the motor vehicle administration system and the statewide election process."

Medicaid Management Information System (MMIS)

This effort replaces the existing MMIS for the State of Michigan which was first developed in the late 1970s. The objective of this project is to replace it with a system that is certifiable by the federal government and one that is run with current software on a more current platform. This will provide the ability to make enhancements and changes requested by federal and state governments in a more timely and efficient manner. There will also be functionality giving health care providers the ability to enter claims and update records in real time, rather than having to complete and submit hard copy forms.

*See Appendix B for a complete list of initiatives

Air Surveillance Monitoring

As thousands of baseball fans gathered in Detroit for the All-Star game this summer, public health officials were using technology tools to keep them safe.

They monitored reports from area hospitals, watching out for any worrisome trends - such as an unusually high number of respiratory complaints, which could signal a problem as serious as anthrax. Had there been a problem, an Internet-based, secure alert network would have alerted health care providers by e-mail, phone and text messages.

Rochester Hills' Jason Lenard is glad the state was watching his back at the game, "Knowing this is happening behind the scenes makes me feel even more secure."

GOAL FOUR

Make Michigan a "Great Workplace" and the employer of choice for technology professionals

Goal Description

Government technology is a rapidly changing landscape. To succeed in serving our agency partners and our customers, we must attract and retain the best technology talent by providing meaningful work, offering professional opportunities, and expanding the career potential of our technology workforce.

Strategies	Targets and Metrics
▪ Strengthen relationships and communicate within MDIT,within SOM government, and externally	▪ Improve employee satisfaction ▪ Establish relationships with two higher education institutions each year to attract future technology professionals
▪ Provide professional development for staff	▪ Performance Management and Individual Development Plans will be in place for all MDIT employees by second quarter 2006 ▪ Provide annual leadership development to all MDIT management ▪ Fully implement the MI-360 program to assist in the development of all management staff in 2006
▪ Ensure continuity of leadership within MDIT	▪ Complete succession planning for managers and key personnel on mission critical applications in 2007 ▪ Benchmark State IT compensation with the technology industry in 2007
▪ Foster a productive and positive atmosphere / environment	▪ Coordinate two events per quarter aimed at building an enriched culture for MDIT and its employees ▪ Develop an internal forum for communications, file sharing, and correspondence in 2006 ▪ Standardize position description templates for appropriate classifications by 2008

Connecting the Goal to Action

Representative Initiatives for Goal Four*

Vision and Values Initiative

Coordinated with Governor Granholm's Executive Branch Values Awareness, Alignment, and Performance Management initiative, this provides guidance in aligning employee personal values, interests and skills with statewide values throughout MDIT.

Leadership Development Program

This annual event is hosted by MDIT as a growth and development opportunity for department managers. The event, held in a conference-style setting, provides tools and training to help grow MDIT leadership.

Succession Planning

By identifying trends and projections for potential employee departure, succession planning is MDIT's effort to plan for continuity of operations; therefore helping identify skill sets that will be required to meet future departmental needs.

Human Capital Management and Employee Development

This initiative primarily focuses on the MDIT employees and internship program. Professional development and job alignment improves the MDIT work environment and ultimately leads to higher productivity and client satisfaction.

Technical User Groups

Because of the specialized technical talent in the organization, technical user groups are formed to provide MDIT's staff with the necessary networking and training needed to improve the use of various applications like Java or .NET. These user groups give MDIT's technical staff another needed avenue for learning.

Student Internship Program

To foster and develop the department's young talent, the student employment program provides outreach to universities and colleges around the state to recruit future employees, while securing specialized training and developmental opportunities for the existing MDIT student talent pool.

*See Appendix B for a complete list of initiatives

MI - 360° Evaluation

Diana Quintero got feedback from 30 colleagues, employees and supervisors as part of her performance evaluation. The MI 360 evaluation program allows Michigan employees to give and receive feedback - and improve themselves. Surveys went out to people of Quintero's choosing. Responses go directly to the Office of Great Workplace Development and remain anonymous.

"It gave me a clearer picture of how I was interacting and communicating with different people at different levels," Quintero said. Once she'd seen the results, she was able to focus on areas such as being more assertive and speaking up more at meetings. "I've seen tremendous results," she adds.

PROOF POSITIVE

GOAL FIVE

Create a statewide community of partnerships

Goal Description

No government or business can realize its vision alone. To create the economic powerhouse envisioned by Governor Granholm, we must work together. Michigan will connect with businesses, local governments, and educational institutions to foster an open and energetic dialogue. With our partners, we will generate momentum, uncover opportunities to share limited resources, and discover solutions without boundaries.

Strategies

- Create innovative partnership programs in education
- Create innovative partnership programs in environment
- Create innovative partnership programs in health and human services
- Create innovative partnership programs in economy
- Create innovative partnership programs in better government
- Create innovative partnership programs in hometown security by providing fully interoperable communications amongst first responders for crises

Targets and Metrics

- Collaborate with schools to standardize back office applications to reduce costs and potentially shift IT dollars back to their students by 2008
- Facilitate the collaborative development of a statewide land use database for use by state and local government, federal government, developers, and universities in 2006
- Begin facilitating the development of a Michigan Health Information Network (MHIN) with area hospitals, insurance companies and other public and private entities in 2006
- Extend Michigan's permitting systems to five local units of government to reduce end-to-end cycle times in 2006
- Extend Michigan's cyber security education to local governments in 2006
- Enable 75 percent of local government to be online by the end of 2008
- Complete operational communication plan for interoperable communications by end-of-year 2006
- Develop a strategy to bridge the gap identified in assessment of current ability to achieve interoperable communications (fiscal year 2007)
- All first responders will have interoperable communications by 2008
- Assure continuity of interoperable communications for first responders by 2010

Connecting the Goal to Action

Representative Initiatives for Goal Five*

e-Citizenship Project

This effort establishes an enhanced statewide access policy. As part of this effort assistance is provided to local governments to develop Web sites, working with the Universities, students receive credit for developing local government web sites. Additionally, MDIT will automate required reporting to the state, identify and eliminate database redundancies across government agencies, and develop more universal e-transactions and processing.

MPSCS 800 MHz System

The MPSCS is a statewide 800 MHz radio system designed to provide interoperability between state, local and federal emergency services. The baseline system is designed for voice communications and consists of 196 tower sites around the state providing for 97 percent mobile coverage. More than 29,500 radios rely on MPSCS with over half the radios used by local government first responders.

Michigan Digital Government Summit

This annual fall event fosters discussion and dialogue on the use of IT as a strategic tool for managers, executives and policy makers throughout state and local government. Summit topics include new technologies; digital government trends; best practices; cross-jurisdictional collaboration; and policies and standards. This has been held for the past three years with over 400 participants in 2005.

Technology Tri-Corridor

This effort builds upon the success of the Life Sciences Corridor by incorporating advanced automotive technologies and the emerging business sector of homeland security. This allows Michigan to broaden its scope of technology and innovation while continuing to build on our state's already strong industry sectors. These three sectors can leverage grant money and support crossover research.

I-Services

A data sharing initiative moving towards Phase II in FY06 that allows criminal justice agencies to share data with the creation of a state managed Data Warehouse. Many federal, state, and local agencies are currently participating and discussions are occurring with bordering states to link large scale state systems together for the same purpose.

*See Appendix B for a complete list of initiatives

Public Safety Communications System

About 100 state and local law enforcement officers who traveled from Michigan to Louisiana to lend a hand in Hurricane Katrina's aftermath needed a way to communicate amongst themselves and with Louisiana officials. State of the art radios from the Michigan Public Safety Communications System allowed them to do just that.

MPSCS technician Rick Lewis traveled cross country with state troopers to program Louisiana's radio system into Michigan's 800 MHz digital radios so they could communicate.

"The officers were deployed and we were able to communicate with them from our mobile command unit," Michigan State Police Lt. Patrick Richard said. "It was clear as day. It made our job all that much easier."

Solutions

"Michigan has changed the citizen and business experience through a broad suite of real-time transactional services, powered by an increasingly shared and robust infrastructure, (re)designed around a coherent statewide architecture, and supported by a coordinated and collaborative planning process that strives to balance the needs of the enterprise with the legitimate interests of individual agencies to act independently."

Paul Taylor, Center for Digital Government

The strategic planning process (see Appendix A) requires a look into the next three to five years to identify future technology solutions that support Michigan's priorities to protect families, attract business and educate our children.

This Strategic Plan reflects how our goals have been formed on building on the foundations of MDIT which include Architecture (see Appendix E), Cyber-Security (see Appendix F), Finance & Human Resources (see Appendix G), IT Procurement Services (see Appendix H) and Statewide Communications (see Appendix I). Our plan is to deliver services in the future using the seven technology solutions that have emerged and make sure our foundations are ready for them.

As the State of Michigan's IT services provider, MDIT – in partnership with MITEC – facilitates the process of information and service sharing (Appendix J provides additional information on the MDIT Agency Services Strategic Plan). In the coming year, MDIT and MITEC will continue this partnership and build upon the state's technology foundation by investigating future technology solutions to meet Michigan's business needs.

seven TECHNOLOGY solutions

Seven Technologies

Pushing Innovation through Technology

Remote workers, Wireless access, Instant messaging, Pod casting. Wikis. Voice over Internet Protocol. Speech recognition for telephony and call centers, Really Simple Syndication. And what in the world is XBRL? The list of emerging trends and technologies can make one's head spin.

Researchers and analysts, such as the Gartner and Forrester research advisory groups and the Center for Digital Government, make it their life's work to predict what is coming so that industry and government can prepare.

Part of MDIT's role is to gather information from objective analysts and learn from their expertise and to study their recommendations. And, through our strategic planning process and additional research, work with MITEC to determine the projects and initiatives to focus on in the coming years in order to make our vision of "A Connected Michigan" a reality.

In 2005, MDIT has done just that. Key MDIT managers and staff, in conjunction with MITEC, studied both societal and technological trends with research and advisory groups, questioned the realities resulting from the changing demographic of citizens and employees, and identified commonalities of the major business issues and drivers that are pushing tomorrow's decisions. From this examination, MITEC and MDIT identified seven technology areas (see Appendix K) which they determined will provide the State of Michigan the greatest benefit.

MITEC and MDIT will now take this analysis and understanding to the next level. Seven cross-agency workgroups will identify specific projects for the 2007 budget to address these future opportunities and how they can be applied across state government. We anticipate not only looking at the feasibility of these solutions, but also examining what type of return on investment our citizens can expect if we move forward on these initiatives.

- Citizen Transactions (self-service)
- Data Integration (sharing)
- Enterprise Contact Center
- Collaboration Tools
- Mobile Worker (computing)
- Shared Administrative Services
- Integrated Infrastructure

Self-Service

Data Integration

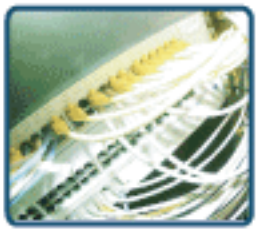
Contact Center

Collaboration Tools

Mobile Worker

Shared Admin. Services

Integrated Infrastructure



Citizen Transactions (Self-Service)

Executive Overview

Whether it is using an ATM to get cash at midnight or a kiosk to check in before a flight instead of waiting for a ticket agent, self-service has become commonplace. Credit card companies offer cardholders the option of checking their balances, making payments or applying for more credit over the phone and online. Gas station customers can fill up their tanks and pay at the pump. More and more, citizens demand information, access and service around the clock. Conveniently. Cost-effectively. Securely.

E-services were one of the first and most visible aspects of digital government. In fact, electronic commerce was the predominant public face of digital government for several years. It was the benchmark for performance, level of IT maturity and strongly defined the state brand. States now directly provide government services to citizens, business, government, employees, and employee to employee. Enhanced connectivity and content also supports services among businesses, businesses and customers and citizens in general.

The opportunities and potential for self-service have grown, and Michigan's goal is to become a global leader in interactive service delivery. MDIT is using the 2006 Cabinet Action Plan as a roadmap, and the findings from the 2004 Digital State Survey, 2005 Brown University State e-Government Study, 2005 Best of the Web and the 2005 Government Performance Project to identify performance gaps as well as future opportunities. Our cross-agency work group is currently assessing free-standing self-service work stations and will subsequently be addressing the requirements for the following goals:

- Ensure the highest standards of privacy, security and access for people with disabilities
- Expand the range of available service areas, develop new interactive services and improve adoption
- Utilize the full range of technologies and channels, fully integrating the portal with other channels including face to face contacts, and ensure customer care and feedback
- Focus on shared intergovernmental, public and private services as well as the capability to address global collaboration and competition
- Fully support the Michigan Cabinet Action Plan goals as well as the IT strategic plan goal to expand Michigan's services to "anyone, at anytime, from anywhere"
- Use interactive services and information sharing as a part of the overall government transformation strategy, including e-citizenship and e-democracy capabilities

* See Appendix K for more information

Data Integration

Executive Overview

For years, the private and public sectors have been investing millions of dollars in building vast data warehouses in hopes of creating competitive advantage.

Similarly, every business, and in the State of Michigan, every agency made the same investment. However, as Michigan enters the 21st century and the information age, the real competitive advantage will come from sharing information among all agencies and departments and leveraging information to reduce costs while enabling decision makers to make more effective decisions faster.

A data repository for common citizen information promises to solve the problem of outdated information, duplicate files and information sharing among agencies. Sharing silos of information that exist benefits the state by reducing redundant data entry, improving data integrity, increasing accuracy and immediacy and improving decision making.

The State of Michigan has already seen huge benefits from such integration. For example, the Child Support Enforcement System (CSES) currently shares Department of Treasury, Court Systems, Department of State, and the Department of Human Services information to ensure that child support payments are paid on time.

To further these benefits, a cross-agency workgroup has been formed to determine the best statewide applications of this technology. The workgroup is currently assessing the feasibility of a K-20 data warehouse for education information as well as an I-Services initiative to share criminal justice information of several agencies.

* See Appendix K for more information

Enterprise Contact Center

Executive Overview

New York City residents can dial 3-1-1 to get information, resolve issues and request services - in 170 languages - around-the-clock. Their centralized system also means that citizen service representatives can route police non-emergency calls to the city's 122 police precincts.

Michigan may benefit from a similar single point of entry to state government through an enterprise contact center to handle citizen requests, improving customer service and providing faster response time. A central contact center would mean consolidating similar - but disparate - efforts across agencies, generating cost savings and providing the ability for greater customer service capabilities across government. The state could leverage its buying power offer one-stop-shopping convenience, and provide more consistent and constituent-friendly service.

In fact, the Michigan Legislature has rewritten the Telecommunication Act and requires the state to provide the information and resources to implement a 2-1-1 service in the state and support a statewide routing system connecting all regional answering points.

In *The World is Flat*, Thomas L. Friedman describes the virtual call center used by low-fare airline JetBlue. The airline "home-sources" its call center operation, meaning the New York-based JetBlue's reservations agents are sitting at home in Salt Lake City, Utah. The workers say they are happier working from home and are, therefore, more productive and loyal. By extending and stabilizing our call center infrastructure, the state of Michigan could in-source those out-of-state centers that are currently providing services to our citizens - bringing jobs back to Michigan in the process.

There are at least nine Michigan agencies with some form of contact center in place and a multitude of state business units providing call-center services. The intent of MITEC and the current cross-agency workgroup is to identify an enterprise approach to future call centers. By investing collectively in our systems, we can offer a greater array of services across all of state government and continue that service into the local communities.

Strategies the State of Michigan is currently assessing include: stabilizing the technology, addressing facility issues, creating a contact center brand (1-800-Call-Mich), VoIP strategy, in-sourcing existing contact centers, support strategies, and constituent relationship management (CRM) on-demand.

* See Appendix K for more information

Collaboration Tools

Executive Overview

With shrinking staff and budgets, the State of Michigan is looking for tools to increase worker productivity by easing collaboration. Specifically, a collaboration tool would create synergies and save money thus increasing the speed of response and improving team productivity to reduce waste.

Opportunities for collaboration across state government abound:

- Web conferencing can support online meetings and applications (live help, support, training, and online seminars) reducing travel for employees.
- Instant messaging can help employees determine whether a certain subject-matter expert is available to communicate in real time.

A customer service representative, for example, could assist a caller quickly by conducting real-time online meetings, sharing information through instant messaging and, if necessary, track down an expert immediately to solve a problem. The same employee could take a professional development course that features a virtual coach, Web camera, video, audio and real-time Q&A sessions - without leaving his desk - cutting down on travel time and cost.

Currently, the State of Michigan uses voicemail, e-mail messaging and audio conferencing, as well as group calendaring, to realize the benefits of collaboration tools. However, the state understands the benefits of increased worker productivity and increased collaboration through investing in other technology solutions.

As a result, in 2006 the state will undertake projects to expand the use of web and video conferencing. In addition, the recently formed cross-agency subcommittee is assessing the feasibility of video streaming, as well as other technology solutions.

* See Appendix K for more information

Mobile Worker / Computing

Executive Overview

Whether it is a Michigan State Police officer patrolling I-75 or a case worker interviewing a client at home, more and more government employees are providing services to citizens offsite, around-the-clock.

Giving these remote workers access to critical data requires adaptation and innovation. Technologies that support this trend include tablet PCs and laptops; Blackberry-like communications devices; and wireless capabilities.

Arming state workers with the ability to work remotely allows the state to be closer to its citizens and provide better, more efficient service. Plus, it can cut red tape by streamlining services, while reducing time, mistakes and cost.

As a result, mobile computing technologies and infrastructure are currently being investigated by a cross-agency workgroup to identify how they support the State of Michigan business goals, strategies to see it happen, potential applications and feasibility of implementing.

To-date, MITEC and the cross-agency workgroup are assessing multiple mobile data capturing applications such as electronic fingerprinting.

Additionally in 2006, both the Michigan Departments of State Police and Transportation (MSP and MDOT) are piloting their own mobile technology applications to see how beneficial this will be for state government. Specifically, MSP is currently piloting a new technology enabled state trooper car, and MDOT is doing a proof of concept to move mobile technology into construction sites.

* See Appendix K for more information

Shared Administrative Services

Executive Overview

A recent Accenture study stated that more than two-thirds of government organizations have implemented or are implementing some form of shared services. However, in order to fulfill business requirements, one first must understand their customers, their markets and how technology can enable shared processes.

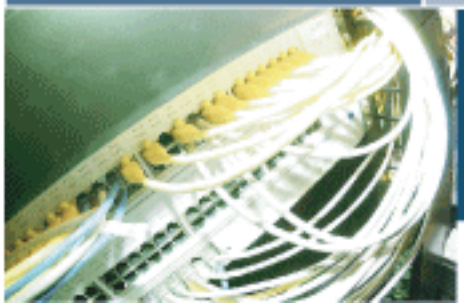
In Michigan, it means identifying common functions across multiple agencies, the technologies to support those functions and re-engineering our processes to deliver better service, all while reducing cost.

One way to achieve this is to adopt consistent processes across state government. Another is to share services among departments. For example, the Department of Civil Service recently opened the "MI HR" employee self-service center to handle employee needs such as adding dependents and changing benefits. This ability to share services enabled departments statewide to reduce or reassign 138 full-time employee equivalents, saving $25 million each year.

It is because of efficiencies such as these that MITEC understands future investment in shared services is required to make government leaner but not meaner. As a result, a cross-agency workgroup is investigating the possibility of investing in technologies to increase the efficiency of services such as financial operations, document management and employee time and expense-tracking functions.

* See Appendix K for more information

Integrated Infrastructure



Executive Overview

As technology changes and the number of solutions increase, there is a growing need for accessing reliable information in real time, independent of where it resides, the form it is held in, or how it is processed. The means to access information must be flexible - whether through the Web, telephone, PC, or hand-held device.

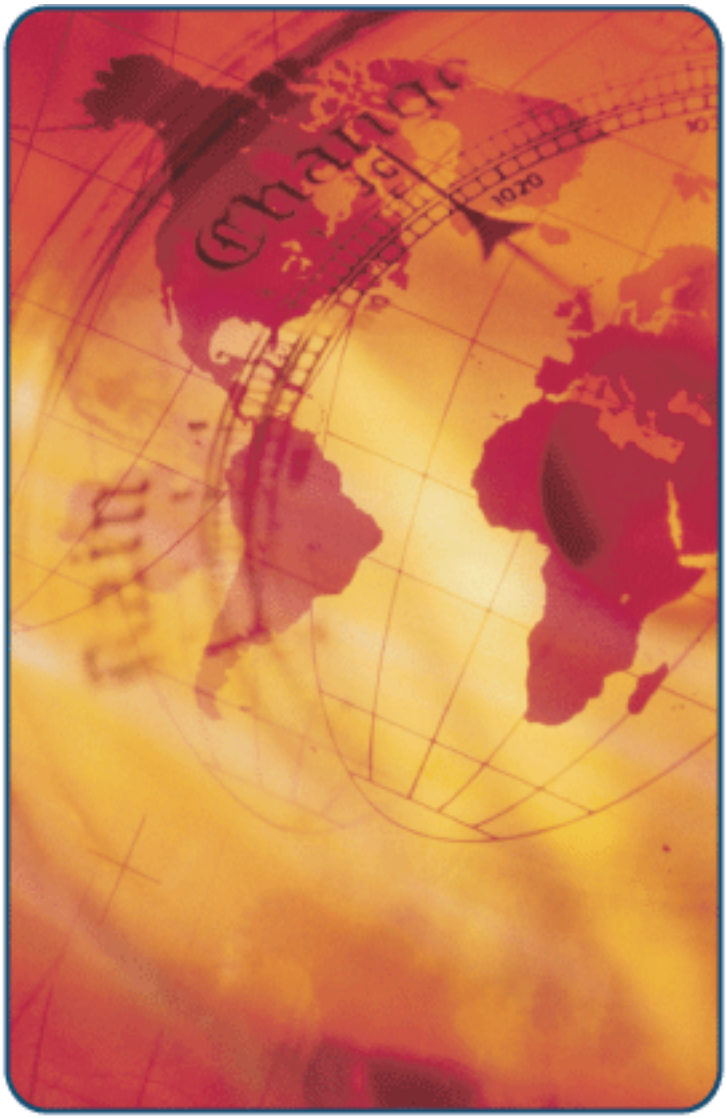
To deliver, Michigan must re-examine current structures and processes to find improved ways of conducting state business.

Data is currently stored on a myriad of devices in numerous formats and protected by regulations and exponential growth. Sharing and leveraging that data and providing for support is costly. Additionally, programs that use this data to process taxes, store criminal records and provide other state services are written in multiple computer languages and housed on hardware sometimes past its useful shelf life.

As a result, the State of Michigan is moving to integrate its infrastructure. MDIT is consolidating e-mail users onto a common platform and merging 700 e-mail servers throughout the state into 70 centrally-hosted and maintained servers. In 2006, MDIT will continue to standardize desktop workstations, consolidate directories, expand server centralization and consolidation and further enterprise monitoring and management.

The cross-agency workgroup is assessing selected computing and network/communications solutions clusters such as: server virtualization, J2EE, MS high-end servers, partial network storage, wireless enabled laptops, and Blade servers in the area of computing. In the area of networks/communications, solutions being assessed include: IP Telephony, Local Area Network Voice over IP (LAN VoIP), wireless networking and unified messaging.

* See Appendix K for more information



Future

Investing in our Foundation
Advancing 7 Technology Solutions
Infusion Strategies

Developing this Strategic Plan has demanded a look to the future to ensure Michigan is ready for what it holds.

- A future where change is constant, requiring that Michigan government be more nimble in order to maintain - and exceed - its current high level of performance.
- A future where the demand for state services continues to grow, as does the expectation that more services must be provided to anyone, at anytime, from anywhere.
- A future that demands efficiency gains and savings from all areas.

The State of Michigan is committed to find the best way to address these challenges and reach our vision, including solutions that move the state forward and that ensure our children are educated, our families are protected, and our economy grows.

In order to make this plan a reality, we must act. Our actions will include three distinct, coordinated efforts: investing in our foundation, advancing the seven technology solutions, and pursuing infusion strategies to chart our course in the changing world.

Michigan's Next Steps
Implementing our Strategic Plan

Investing in our Foundation

The consolidation of IT resources has resulted in significant savings and better service to our customers, whether citizens, businesses, or government agencies. Our planning process has highlighted these as foundational areas on which MDIT will continue to focus its near-term efforts:

- Architecture (Appendix E)
- Cyber Security (Appendix F)
- Finance and Human Services (Appendix G)
- IT Procurement (Appendix H)
- Statewide Communication (Appendix I)

MDIT will invest in each of these five areas, leveraging the skills and creativity of our employees to build the foundation upon which all of our plans are based. The metrics and targets associated with Michigan's five IT strategic goals in this plan define key results expected in the 2006-08 time frame.

Advancing the Seven Technology Areas

MDIT and its clients will advance the seven technology areas defined in pages 25-32. Pursuit of these technologies depends upon our ability to maintain and improve our five foundational areas. These technologies also represent a shift in IT's role. IT solutions are now more than a way to automate existing government services. IT innovations present opportunities to dramatically improve the way government services are delivered.

In 2006 alone, MDIT will advance at least two projects inspired and enabled by each of the technology areas. Examples include:

Mobile computing
- Piloting a technology-enabled Michigan State Police car
- Electronic medical records

Collaboration tools
- Blogging
- Streamlined web conferencing

Citizen transactions / self-service
- Self-service stations for the Michigan Department of State (MDOS)
- Standardized electronic forms for online transactions

Data sharing and integration
- K-20 data warehouse
- Data warehouse enterprise strategy

Contact center
- MDOS contact center integration
- Family Resource Center expansion

Integrated infrastructure
- Messaging consolidation
- Desktop standardization

Shared administrative services
- e-Procurement
- e-Grants

The development of projects in these seven technologies will provide additional opportunities for government agencies to share solutions. Advances in these technologies and others will present additional opportunities for government agencies to re-think the way they serve constituents.

Infusion Strategies for Driving Michigan into the Future

This strategic plan defines the path for Michigan to follow to continue its successful application of IT for the next several years. But, as the world continues to flatten, we must plan for the next government and IT model. MDIT has begun this planning, as evident in the existing IT strategic goals and targets, plans for the foundational areas, and the development of the seven technology areas. To most effectively address leading global and national issues as well as maximize available opportunities, MDIT will pursue a strategy infusion process.

The strategy infusion process (see Appendix L) refers to a structured reassessment and redesign of goals, strategies, processes, and programs while they are operating. MDIT will evaluate the vision and strategies that are required to support and bridge near, intermediate, and long-term planning requirements. The key themes in this effort are:

- Shifting from an information technology (IT) to an information, communication, technology (ICT) conceptualization of mission, strategies, and actions

- Full implementation of an effective and mature digital government within Michigan's public sector, shifting from access and interaction to engagement and participation

- Use of information, communications, technology, and process redesign to transform government goals and desired outcomes, including governance, participation, and the quality and variety of services

Measuring our Progress

Investing in our foundation, advancing the seven technologies, and pursuing the strategy infusion process will bring this plan to life. We do not plan for the sake of planning - we plan to deliver results. Michigan will publish the status of the targets and metrics contained within this plan at least once per year to ensure we are doing just that.

Already, Michigan has taken practical and significant steps on the way to meeting its challenges to become "a connected Michigan." The coming years will see an ever growing role for IT that not only "connects," but also expands and pushes Michigan to, as Governor Granholm has said, "reach the summit of its potential."

Jennifer M. Granholm
Governor of Michigan

Teri Takai
Chief Information Officer, State of Michigan
Director, Michigan Department of Information Technology

Michigan Department of Information Technology
George W. Romney Building, 8th Floor
111 South Capitol Avenue
Lansing, MI 48913

Bureau of Strategic Policy
(517) 241-5697
MDIT@Michigan.gov

Appendix A - Michigan's IT Planning Process

Michigan's IT Planning Process

The value of IT lies in its enabling government to deliver services to constituents more effectively and efficiently. Technology not only enables the automation and improvement of existing business processes, but it also presents opportunities to completely reshape the way that we do business.

To harness this value, IT personnel participate in all phases of the State of Michigan's business planning process (see illustration), all of which focus on delivering services to constituents. These IT professionals not only provide answers to existing problems, but also provide the technology solutions that drive innovation and change in the way that Michigan delivers services to its constituents.

Budgeting for Outcomes

The State of Michigan's executive budget recommendation is developed using this process (see http://www.michigan.gov/documents/A13-16_115963_7.pdf for detail), which focuses on providing government services in six priority areas: Education, the economy, the environment, health and human services, hometown security, and better government. IT personnel participate in each of the six priority area-focused work groups, communicating to all involved how IT can be used to deliver the best results for citizens.

Cabinet Action Plan

The Cabinet Action Plan (see http://www.Michigan.gov/cabinetplan for detail) brings the executive budget to life by publicly defining the governor's highest priority commitments to the citizens of Michigan. IT planning personnel help facilitate this process by working with policy advisors and key state agency personnel to clearly define the actions and outcomes for which each agency is responsible in fulfilling the commitments. This participation gives the Department of Information Technology (MDIT) an early and unique view into state business plans and priorities that helps MDIT evaluate the technologies that might best serve the state of Michigan.

Enterprise IT Futuring

Key Department of Information Technology (MDIT) managers and staff, in conjunction with MITEC (see appendix D), looked into the future to set the direction for IT in the State of Michigan. They examined government, constituent, and technology trends, and the group identified common enterprise-wide business drivers. From this examination, MITEC gave MDIT approval to further investigate 7 technology areas for potential state implementation.

Seven joint MITEC / MDIT subcommittees were formed to investigate potential uses for the seven technology areas. Each group prioritized the potential uses based upon their impact in multiple agencies across the state. The groups are developing business case justifications for their priority technology applications. These business cases will help secure funding for collaborative technology investments in the next rounds of budget preparation.

Michigan IT Strategic Plan

The IT requirements set forth in Budgeting for Outcomes, the Cabinet Action Plan, and enterprise IT futuring define Michigan's IT Strategic Plan. It is the responsibility of MDIT to ensure that it completes its Cabinet Action Plan commitments. Additionally, MDIT Agency Services periodically reviews all of the commitments in the statewide Cabinet Action Plan, seeking to apply new and existing technology solutions to help its client agencies fulfill their commitments.

Based upon the requirements identified in the enterprise IT futuring exercises and MDIT's review of the Cabinet Action Plan, MDIT implements the client solutions that will provide the greatest benefit at the lowest cost to the entire State of Michigan. While MDIT clients fund IT services through their departmental budgets, strategic planning in and across the various parts of MDIT ensures that enterprise-appropriate solutions are provided. While the IT project list may reflect individual agencies' immediate needs, those projects are completed so that other agencies can leverage the work that is already in place.

As MDIT moves forward to implement its parts of Michigan's plan, IT funding requests will be evaluated for their citizen benefit in the next iteration of Budgeting for Outcomes.

Appendix B - Top IT Projects

Top IT Projects

Using this document

This document provides additional detail about Michigan's top IT projects. The first three sections list projects by: (1) Sponsoring client agency; (2) the primary Michigan IT strategic goal to which the project aligns, including a cross reference to indicate state priority area alignment; and (3) the primary state priority area with which the project aligns, including a cross reference to indicate state IT strategic goal alignment. The final section provides narrative detail about each project in alphabetical order.

Table of Contents

Top IT Projects, by Client Agencies

All Agencies

- 360 Degree Evaluation
- Citizen Survey
- CyberMichigan Board
- Data Warehouse Framework
- e-Citizenship
- e-Forms
- e-Grants
- Enterprise Contact Center
- Hometown Security Grant Initiatives
- Michigan Center for Geographic Information (CGI)
- Michigan Digital Government Summit
- Michigan Technology Executive Committee (MITEC)
- Michigan Public Safety Communications System (MPSCS) 800 MHz System
- Statewide e-Grants Portal
- Statewide Intranet
- Technology Tri-Corridor
- Video Streaming
- Videoconferencing
- Vision and Values Initiative

Agriculture

- Animal Identification System
- Revenue System Replacement Project

Attorney General

- Charitable Trusts
- FileMaker Database Replacement
- Online Complaint Resource

Budget Office

- Financial System Study
- Time and Expense

Civil Service

- Document Management for Civil Service
- Integrated Testing Reengineering
- Lawson Upgrade

CEPI

- K-20 Data Warehouse

Michigan Department of Community Health

- HIT (Health Information Technology)
- Medicaid Management Information System (MMIS)
- Women, Infants and Children (WIC) – Electronic Benefits Transfer
- Women, Infants and Children (WIC) System Replacement

Department of Corrections

- Michigan Prison Re-entry Initiative (MPRI)
- Offender Network Management Information (OMNI)

Department of Education

- Converting the MEAP Exam
- State Aid Payment System Infrastructure Improvements

Department of Environmental Quality

- e-Manifest - Electronic Manifest Tracking System
- Health and Environmental Data Integration Project for Homeland Security
- Michigan Air Compliance Enforcement System (MACES)
- Michigan Environmental Results program for Dry Cleaning (MERP)

Department of Human Services

- Bridges
- Michigan Child Support Enforcement System Enhancements (MiCSES)
- Service Worker Support System – Child Protective Services (SWSS-CPS)

Department of Information Technology

- Human Capital Management and Employee Development
- Information Technology Asset Management (ITAM)
- Leadership Development Program
- Management and Use of Independent Research Firms
- Michigan Master Training Contract
- Michigan/1
- Rate Development
- Return on Investment (ROI) Training
- Secure Michigan
- Single Sign-On
- Strategic Plan Project
- Student Employment Program
- Succession Planning
- Technical User Groups
- Wireless Infrastructure
- Voice over Internet Protocol / Voice Consolidation

Department of Labor and Economic Growth

- Commercial Services Licensing System
- Michigan Land Bank Fast Track Authority Land Management System
- Michigan Talent Bank (Mi-Internship Expansion)
- Michigan State Housing Development Authority (MSHDA) Re-write
- Online Business Startup Wizard
- Unemployment Insurance Agency System Re-write Phase 1 - Business Requirements Gathering

Department of Management and Budget

- ACH Credit Card Project Phase 2
- Contingency Planning Tool Assessment
- e-Procurement
- MAIN Web Front End Hosting move to Michigan
- Social Security Number Assessment and Remediation of MAIN
- Vision ORS

Department of Military & Veterans Affairs

- Military and Veterans Affairs Strategic Plan Continuation

Department of Natural Resources

- Integrated Forest Management Application (IFMAP)
- Vegetative Management System (VMS)

Department of State

- Business Application Modernization (BAM) – Driver License and Vehicle Registration
- Self-Service Stations

Office of State Employer

- 360 Degree Evaluation
- Vision and Values Initiative

Michigan State Police

- Commercial Vehicle Information Systems and Networks (CVISN)
- Create a Fusion Intelligence Center
- Criminal History Rewrite (CHR)
- Finger Print and Palm Print Imaging
- I-Services
- Law Enforcement Agency Management System (LEAMS)
- Law Enforcement Information Network (LEIN) - Next Generation
- LCMS/CODIS
- Personal Protection Orders Phase II
- Sex Offender Registry (SOR) / Public Sex Offender Registry (PSOR)

Department of Transportation

- Crash Process Redesign (CPR)
- Document Management Program
- Field Manager Enhancement
- FieldNet
- Project Accounting and Billing
- Vehicle Information Integration (VII)

Department of Treasury

- New MERIT Award

Top IT Projects by Michigan IT Strategic Goal – Aligned with State Priority Area

Goal 1: Expand Michigan's services to reach anyone, at any time, from anywhere

	Priority Area					
Project Name	**Education**	**Economy**	**Hometown Security**	**Health & Human Services**	**Better Government**	**Environment**
Commercial Services Licensing System					X	
e-Grants					X	
Hometown Security Grant Initiatives			X			
Michigan Center for Geographic Information (CGI)					X	
Michigan Talent Bank (MI-Internship Expansion)		X				
Michigan/1					X	
Online Complaint Resource					X	
Secure Michigan			X			
Self-Service Stations					X	
Sex Offender Registry(SOR)/Public Sex Offender Registry (PSOR)			X			
Single Sign-On					X	
Wireless Infrastructure					X	

Goal 2: Transform Michigan's services through sharing and collaboration

	Priority Area					
Project Name	**Education**	**Economy**	**Hometown Security**	**Health & Human Services**	**Better Government**	**Environment**
ACH Credit Card Project Phase 2					X	
Commercial Vehicle Information Systems and Networks (CVISN)			X			
Crash Process Redesign (CPR)			X			
Criminal History Rewrite (CHR)			X			
Data Warehouse Framework					X	
Document Management Program					X	
Enterprise Contact Center					X	
e-Procurement					X	
Health Information Technology (HIT)				X		
K-20 Data Warehouse	X					
Law Enforcement Agency Management System (LEAMS)			X			
Law Enforcement Information Network (LEIN) - Next Generation			X			
MAIN Web Front End Hosting move to Michigan					X	
Service Worker Support System – Child Protective Services (SWSS-CPS)				X		
Social Security Number Assessment and Remediation of MAIN					X	
Statewide Intranet Project					X	
Video Streaming					X	
Videoconferencing					X	
Women, Infants and Children - Electronic Benefits Transfer				X		
Women, Infants and Children System Replacement					X	

Goal 3: Manage technology to provide better service and faster delivery

	Priority Area					
Project Name	**Education**	**Economy**	**Hometown Security**	**Health & Human Services**	**Better Government**	**Environment**
Animal Identification System						X
Bridges				X		
Business Application Modernization (BAM) - Driver License and Vehicle Registration					X	
Charitable Trusts					X	
Contingency Planning Tool Assessment					X	
Converting the MEAP Exam	X					
Document Management for Civil Service					X	
e-Forms					X	
e-Manifest - Electronic Manifest Tracking System						X
e-Recruiting					X	
Field Manager Enhancement					X	
FieldNet					X	
FileMaker Database Replacement					X	
Financial System Study					X	
Finger Print and Palm Print Imaging					X	
Health and Environmental Data Integration Project for Homeland Security			X			
Information Technology Asset Management (ITAM)					X	
Integrated Forest Management Application (IFMAP)						X
Integrated Testing Reengineering						
Lawson Upgrade					X	
LCMS/CODIS			X			
Management and Use of Independent Research Firms					X	
Medicaid Management Information System (MMIS)				X		
Michigan Air Compliance Enforcement System (MACES)						X
Michigan Child Support Enforcement System Enhancements (MiCSES)				X		
Michigan Environmental Results Program for Dry Cleaning (MERP)						X
Michigan Land Bank Fast Track Authority, Land Management System		X				
Michigan Prison Re-entry Initiative (MPRI)			X			
Michigan State Housing Development Authority (MSHDA) Re-Write		X				
New MERIT Award	X					
Offender Management Network Information (OMNI)			X			
Online Business Startup Wizard		X				
Personal Protection Orders (PPO) Phase II				X		
Project Accounting and Billing					X	
Rate Development					X	
Return on Investment (ROI) Training					X	
Revenue System Replacement Project					X	
State Aid Payment System Infrastructure Improvements					X	
Time and Expense					X	
UIA System Re-write Phase 1 - Business Requirements Gathering					X	
Vegetative Management System (VMS)						X
Vehicle Information Integration						
Vision ORS					X	
Voice over Internet Protocol / Voice Consolidation					X	

Goal 4: Make Michigan the employer of choice for technology professionals

	Priority Area					
Project Name	**Education**	**Economy**	**Hometown Security**	**Health & Human Services**	**Better Government**	**Environment**
360 Degree Evaluation					X	
Human Capital Management and Employee Development					X	
Leadership Development Program					X	
Michigan Master Training Contract					X	
Military and Veterans Affairs Strategic Plan Continuation			X			
Strategic Plan Project					X	
Student Employment Program					X	
Succession Planning					X	
Technical User Groups					X	
Vision and Values Initiative					X	

Goal 5: Create a statewide community of partnerships

	Priority Area					
Project Name	**Education**	**Economy**	**Hometown Security**	**Health & Human Services**	**Better Government**	**Environment**
Citizen Survey					X	
Create a Fusion Intelligence Center			X			
CyberMichigan Board					X	
e-Citizenship					X	
I-Services			X			
Michigan Digital Government Summit					X	
Michigan Information Technology Executive Committee (MITEC)					X	
Michigan Public Safety Communications System (MPSCS) 800 MHz System			X			
Statewide e-Grants Portal					X	
Technology Tri-Corridor		X				

Top IT Projects by State Priority Area – Aligned with Michigan IT Strategic Goal

Education

	Michigan IT Strategic Goal				
Project Name	**1**	**2**	**3**	**4**	**5**
Converting the MEAP Exam			X		
K-20 Data Warehouse		X			
New MERIT Award			X		

The Economy

	Michigan IT Strategic Goal				
Project Name	**1**	**2**	**3**	**4**	**5**
Michigan Land Bank Fast Track Authority, Land Management System			X		
Michigan State Housing Development Authority (MSHDA) Re-Write			X		
Michigan Talent Bank (MI-Internship Expansion)	X				
Online Business Startup Wizard			X		
Technology Tri-Corridor					X

Hometown Security

	Michigan IT Strategic Goal				
Project Name	**1**	**2**	**3**	**4**	**5**
Commercial Vehicle Information Systems and Networks (CVISN)		X			
Crash Process Redesign (CPR)		X			
Create a Fusion Intelligence Center					X
Criminal History Rewrite (CHR)		X			
Health and Environmental Data Integration Project for Homeland Security			X		
Hometown Security Grant Initiatives	X				
I-Services					X
Law Enforcement Agency Management System (LEAMS)		X			
Law Enforcement Information Network (LEIN) - Next Generation		X			
LCMS/CODIS			X		
Michigan Prison Re-entry Initiative (MPRI)			X		
Michigan Public Safety Communications System (MPSCS) 800 MHz System					X
Military and Veterans Affairs Strategic Plan Continuation				X	
Offender Management Network Information (OMNI)			X		
Secure Michigan	X				
Sex Offender Registry(SOR)/Public Sex Offender Registry (PSOR)	X				

Health and Human Services

	Michigan IT Strategic Goal				
Project Name	**1**	**2**	**3**	**4**	**5**
Bridges			X		
Health Information Technology (HIT)		X			
Medicaid Management Information System (MMIS)			X		
Michigan Child Support Enforcement System Enhancements (MiCSES)			X		
Personal Protection Orders (PPO) Phase II			X		
Service Worker Support System – Child Protective Services (SWSS-CPS)		X			
Women, Infants and Children - Electronic Benefits Transfer		X			

Better Government

	Michigan IT Strategic Goal				
Project Name	**1**	**2**	**3**	**4**	**5**
360 Degree Evaluation				X	
ACH Credit Card Project Phase 2		X			
Business Application Modernization (BAM) - Driver License and Vehicle Registration			X		
Charitable Trusts			X		
Citizen Survey					X
Commercial Services Licensing System	X				
Contingency Planning Tool Assessment			X		
CyberMichigan Board					X
Data Warehouse Framework		X			
Document Management for Civil Service			X		
Document Management Program		X			
e-Citizenship					X
e-Forms			X		
e-Grants	X				
Enterprise Contact Center		X			
e-Procurement		X			
e-Recruiting			X		
Field Manager Enhancement			X		
FieldNet			X		
FileMaker Database Replacement			X		
Financial System Study			X		
Finger Print and Palm Print Imaging			X		
Human Capital Management and Employee Development				X	
Information Technology Asset Management (ITAM)			X		
Lawson Upgrade			X		
Leadership Development Program				X	
MAIN Web Front End Hosting move to Michigan		X			
Management and Use of Independent Research Firms			X		
Michigan Center for Geographic Information (CGI)	X				
Michigan Digital Government Summit					X
Michigan Information Technology Executive Committee (MITEC)					X
Michigan Master Training Contract				X	
Michigan/1	X				
Online Complaint Resource	X				
Project Accounting and Billing			X		
Rate Development			X		
Return on Investment (ROI) Training			X		
Revenue System Replacement Project			X		
Self-Service Stations	X				
Single Sign-On	X				
Social Security Number Assessment and Remediation of MAIN		X			
State Aid Payment System Infrastructure Improvements			X		
Statewide e-Grants Portal					X
Statewide Intranet Project		X			
Strategic Plan Project				X	
Student Employment Program				X	
Succession Planning				X	
Technical User Groups				X	
Time and Expense			X		
UIA System Re-write Phase 1 - Business Requirements Gathering			X		
Video Streaming		X			
Videoconferencing		X			
Vision and Values Initiative				X	
Vision ORS			X		
Voice over Internet Protocol / Voice Consolidation			X		
Wireless Infrastructure	X				
Women, Infants and Children System Replacement		X			

The Environment

	Michigan IT Strategic Goal				
Project Name	**1**	**2**	**3**	**4**	**5**
Animal Identification System			X		
e-Manifest - Electronic Manifest Tracking System			X		
Integrated Forest Management Application (IFMAP)			X		
Michigan Air Compliance Enforcement System (MACES)			X		
Michigan Environmental Results Program for Dry Cleaning (MERP)			X		
Vegetative Management System (VMS)			X		

Top IT Project Descriptions

360 Degree Evaluation

This project provides employees (management and executives) with a web-based application for self-assessment of competencies and values.

ACH Credit Card Project Phase 2

This effort involves a process redesign to better automate the user processes for distribution of funds (payments to the State).

Animal Identification System

This Michigan system supports the federal NAIS program (The National Animal Identification System) under United States Department of Agriculture.

Bridges

Bridges will re-engineer and integrate the processes associated with the eligibility determination and case management of Michigan citizens seeking state assistance in human services (food, medical insurance, day care, basic economic needs, etc). It will develop integrated and automated tools that support these processes.

Business Application Modernization (BAM) - Driver License and Vehicle Registration

BAM is a multi-phased project that includes re-engineering the business processes, developing business requirements, designing and eventually building a technical infrastructure to support Department of State business.

Charitable Trusts

Currently, charitable trust organizations register with the state, file forms with the IRS and then the IRS sends the paper forms to the state. This project will bring these forms from the IRS electronically to the state. Once here in an electronic form, the state could create more self-service opportunities for citizens seeking information on charitable organizations.

Paper forms cause difficulty in receiving timely information and filings. Citizens need access to information. Electronic transfer solves these problems by eliminating the need to handle thousands of forms and they provide significantly better information about charitable organizations. Also, appropriate information for licensing and regulatory purposes can be accessible to citizens.

Citizen Survey

CyberMichigan.org commissioned a survey of Michigan residents and businesses to explore the role information technology plays in their lives. This survey is conducted during every even-numbered year.

Commercial Services Licensing System

This system will allow for online license insurance application and renewals, monitoring of license compliance, and reduction in manual business support functions.

Commercial Vehicle Information Systems and Networks (CVISN)

The CVISN project is a Federal Motor Carrier Safety Administration (FMCSA) initiative to address safety compliance as well as establish an efficient business system. The goal of CVISN is to improve the safety and efficiency of commercial vehicle operations (CVO) and allow for CVO transactions to be accomplished electronically by 2005. This system will link several State of Michigan computer systems that support commercial vehicle registrations, safety compliance and fuel tax collections. This interconnection will support more efficient interaction of commercial motor vehicle programs between state agencies. The project also provides for electronic screening of commercial motor vehicles at international sites for safety and security purposes.

Contingency Planning Tool Assessment

This involves the evaluation of contingency planning tools to be used statewide in Michigan. This also includes the implementation of a contingency planning tool that will expedite the development of contingency plans for all State agencies.

Converting the MEAP Exam

Michigan high school students take the MEAP exam to determine if they demonstrate sufficient knowledge and understanding of the state's curriculum benchmarks and standards. Results of this assessment are one of the leading indicators in the No Child Left Behind (NCLB) Adequate Yearly Progress (AYP) calculation of school performance. Students also take a college entrance exam, typically the ACT test. This project will provide a replacement test to serve both purposes, a student achievement test and a college entrance exam.

"At the same time, we will let all students know they've got what it takes for college by replacing our high school assessment exam with one that doubles as a college admissions test. And, we will create new high school opportunities, particularly small high schools, to help the tens of thousands of students who now leave high school without a diploma stay on a path that leads to success in college and beyond." - Governor Granholm

Crash Process Redesign (CPR)

Several departments are partnering to develop a traffic crash processing system. The system will improve the quality and timeliness of traffic crash reporting and will improve decision making regarding statewide traffic safety programs administered by state and local agencies.

Create a Fusion Intelligence Center

Before the events of September 11, 2001 and the recent terrorist attacks in London, various intelligence agencies had identified specific operatives as possible terrorists. Breakdowns at the level of interagency communications occurred and it is believed that had communications crossed agency lines, the attacks may have been prevented. Criticism continues to focus on the inability of intelligence agencies to gather sufficient information to predict the attacks. However, even if substantial information and technology applications are available, unless agencies within the intelligence community share information across departmental and agency boundaries, an accurate assessment of threats to Michigan's security are not possible.

Fusion activities will not be limited to terrorism incidents but will provide enhanced intelligence capabilities for all crimes and critical incidents. The system is anticipated to:

- Support receiving, storing, processing, and distributing intelligence to and from agencies at the federal, state, and local level
- Ensure that queries and responses are processed within homeland security parameters
- Establish and implement technology for intelligence sharing
- Coordinate the flow of intelligence data and information
- Acquire and maintain access to various government intelligence data systems

The ability of directly being able to work with federal law enforcement cannot be obtained with computer programs. The close and daily contact allow for more accurate information exchange than search engines.

Criminal History Rewrite (CHR)

An application accessible through the Law Enforcement Information Network, CHR will be migrating to production in fiscal year 2005-2006 and will be supported by State of Michigan staff as the state owns the code. This system will provide solutions to legislative initiatives dealing with background checks.

CyberMichigan Board

CyberMichigan focuses on bringing together the private, public and non-profit sectors to work with communities to close the gap between people and organizations that have quality access to technology and the knowledge to maximize its use and those who do not.

Data Warehouse Framework

By consolidating data from multiple departments into a single, consistent format, the data warehouse could provide the complete view of our customers and constituents that is needed to effectively provide the services that they need.

Based on our limited consolidation to date the state has already experienced significant savings and improvements to service delivery. As more data is consolidated, these benefits can be expected to grow accordingly.

Standardizing on a single platform would also eliminate redundant support costs and provide consistent tools. The latter will enable flexible deployment of developers and provide consistent tools for end users.

However, implementing this concept is too ambitious at this point. There are too many agencies with no experience in warehousing and those with the experience will take time to move in a new direction.

Therefore we are proposing implementing a set of "line of business" warehouses, where related agencies come together to form data warehouses. This is both easier to implement and more cost-effective.

It is easier to implement because related agencies already share many concepts and some data. For example one line of business would be Health and Human Services, which would contain DCH and DHS (including CSES) at a minimum. They already share a great deal of data and share many definitions.

It is also more cost-effective because the most direct value will come from using data from complementary agencies.

While this does not provide all of the benefits of a consolidated warehouse at the beginning, it makes great strides and will still be able to enable end users to get their own data, thus speeding delivery and enabling developers to work on enterprise level tasks.

Document Management for Civil Service

This effort involves the scanning of all hard copy Civil Service documentation of state employees and retirees. This will include enhanced search capabilities of information.

Document Management Program

This effort will develop the standards and framework for shared document management that can be leveraged by all departments across the state.

e-Citizenship

This will establish a statewide, enhanced access policy. In addition to helping develop web sites for local governments, the Michigan Department of Information Technology (MDIT) will automate required reporting to the state, identify and

eliminate database redundancies across government agencies, and develop more universal e-transactions and processing. Additional e-citizenship initiatives will include expanding access through public kiosks and accepting online payments.

e-Forms

The State of Michigan currently provides some services to citizens using e-forms. The e-forms initiative is an expansion of what currently exists in addition to the standardization of forms across departments. The effort will improve government services to citizens and make government more effective and efficient.

e-Grants

Develop an electronic grants portal to exchange information between grantors and grant applicants for all state managed grants. The grantor develops and provides the eligibility requirements and application process tailored to each grant or granting agency. Applicants can apply for grants and submit progress and financial reports online. The grantor will then use the portal to review applications, download data, and view ad-hoc and pre-defined reports.

e-Manifest - Electronic Manifest Tracking System

Michigan is the project lead for this EPA-funded effort to develop a multi-state electronic tracking system to provide management capabilities for waste manifests from initiation to closure.

Enterprise Contact Center

Standardizing the call center infrastructure would enable the State of Michigan to efficiently support agency call centers by reducing the complexity of the environment and dedicating resources to support the contact center infrastructure. It would also enable the reuse of components from previous developments. An enterprise contact center infrastructure would enable efficient use of system capacity and reduce costs for ongoing maintenance by limiting the number of point solutions in place. By leveraging a common infrastructure, the State of Michigan can more economically take advantage of new technologies to improve citizen access to the state (speech recognition), as well as offer workers more flexibility (use voice over IP to enable workers in remote areas, remote-workers).

e-Procurement

A statewide e-procurement system will be implemented to gain efficiency, integrate best practices, and realize overall cost savings throughout the procurement process. The e-procurement system will maintain direct linkages between each component of the acquisition life cycle: procurement, contract management, inventory control, and reporting. This level of integration will allow for reduction in duplication of effort and provide for retention and easy access to relevant historical data for agencies, improving estimating capabilities and shortening cycle times.

Vendors will be able to more efficiently provide and update company information; state their compliance with appropriate laws and agreement with mandatory terms

and conditions at the point of registration; download specific Invitations to Bid (ITB) or Requests for Proposal (RFP); and complete Freedom of Information Act requests and bid submissions electronically. Vendors will also be able to receive notification of relevant solicitations through an automated "push" process rather than the current "pull" process mandated by the inefficiencies of the present system.

Field Manager Enhancement

The Field Manager suite of software manages, tracks, and processes Michigan's entire $1.4 billion annual road and bridge construction program. More than 2,000 people working at 280 MDOT, local government agency, engineering consultant firm, and construction contractor facilities across the state use the software. Field Manager allows for better management of road and bridge projects by reducing administrative overhead, yielding greater value per taxpayer dollar. It is critical the software operates correctly, is maintained, and is upgraded to meet changing business needs and updates to technical environments.

The purpose of this project is to develop two upgrades to the FieldManager suite. The first is a minor upgrade addressing issues of immediate concern, and the second is a major upgrade containing a variety of improvements. The upgrades include software modifications due to business rule changes, audit requirements, changing technology, and standards compliance. The upgrades will also improve performance and reduce long-term maintenance costs.

FieldNet

The current process of transferring construction project information between MDOT, local agencies, engineering consultants, and construction contractors requires significant manual intervention which is time consuming and prone to human error. This project will enhance the FieldNet component of the FieldManager suite of software to automate the construction project file transfer process statewide. The enhanced FieldNet will orchestrate all data transfers, ensure FieldManager databases are synchronized, and ensure transfers are secure and dependable.

Many business areas will realize significant benefits from this project. The enhanced FieldNet will eliminate the manual procedures required to transfer files between the Construction Administration System (CAS) and the FieldManager and FieldBook components of the FieldManager suite. It also includes eliminating the need for construction managing offices to fax pay estimates to MDOT's central office. It is estimated the project will save Michigan approximately $1.3 million per year in reduced hands-on time. The project will also produce significant "soft" non-quantifiable benefits including enhanced security and data integrity, better information connectivity, and greater access to MDOT construction project information.

FileMaker Database Replacement

The purpose of this project is to replace the Department of Attorney General's current database system with a new information management system (IMS) to monitor, increase accessibility to, and report on the department's work. The

department needs a new software management system to manage its core mission of providing effective and efficient legal representation to the State of Michigan.

Financial System Study

This study will examine the costs associated with both retaining and replacing MAIN, the State's financial system. It will determine the best course of action for the future of MAIN as it fits into state business: Retain and maintain; replace in pieces; or replace entirely.

Finger Print and Palm Print Imaging

The existing AFIS system would be updated to allow for a single fingerprint search from a mobile ID device and generate a response back to that device. A new matching feature would be added to AFIS to allow for the mobile searches. This project would also provide a limited number of handheld devices (50 - 60) to perform the search, but would primarily focus on creating the architectural and programmatic changes to the existing system to allow this type of search.

This project provides an immediate benefit in the area of homeland security and public safety. Further, it creates a system that other state departments may utilize to ensure benefits and services are being provided to eligible citizens. Michigan State Police (MSP), local and county law enforcement, Department of Corrections, Department of Natural Resources, or border patrol officers would have the capability of capturing a single fingerprint with a handheld device and transmit that fingerprint to the MSP AFIS system for positive identification, thus reducing the risk of releasing a wanted person or a person who has been identified as a threat to the general public.

Health and Environmental Data Integration Project for Homeland Security

Michigan is the project lead for this EPA-funded effort to develop a multi-state system for managing the appropriate exchange of homeland security related information for emergency response purposes.

Health Information Technology (HIT)

Health Information Technology refers to the application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data, and knowledge for communication and decision-making. This includes such applications as telemedicine and use of the Internet. A central component of HIT is the electronic health record (EHR), a patient's medical file that is stored electronically and maintained by a health care provider to order prescriptions and tests and to inform clinical decisions. The State of Michigan is committed to improving the quality and controlling the cost of health care for its residents. HIT has emerged as a key means to accomplish these goals.

The Department of Community Health and Department of Information Technology are hosting stakeholder forums on HIT. The purpose of these forums is to hear key

stakeholders' perspectives on the role of state government in HIT policy, with the understanding that the state will not develop HIT solutions itself, but rather promote policies to strengthen IT's role in health care improvement and efficiency. A separate forum for consumers will probe the opportunities and concerns with electronically sharing patient information. Stakeholders' perspectives will be collected in a report with recommendations.

Hometown Security Grant Initiatives

Through the Fiscal Year 2004 State Homeland Security Grant Program, the state was awarded $15 million for critical infrastructure protection projects. Of the state's award, MDIT was awarded $4 million. In compliance with state goals to reduce vulnerabilities and mitigate risks to critical cyber and telecommunication infrastructure, the following projects have been initiated:

- Large fixed generators for the Lake Ontario Hosting Center and Traverse Bay Hosting Center critical data centers
- Digital video manager equipment providing physical security at the three critical IT data centers
- Cyber intrusion detection devices and systems
- Network intrusion detection
- Network traffic tools
- Cyber incident investigation and response technologies
- Network analysis and penetration tests
- Authentication and access control technologies
- SurfControl Internet access control and filtering systems prevent system users from accessing web sites that are deemed risks to the state's network and systems
- Virtual private network (VPN) proxy, using Internet security acceleration (ISA) servers, filters connections that have come into the state's network via VPN over the Internet
- Firewall technologies for the internal state network
- Geographical information system (GIS)
- Security Awareness Web Portal to provide outreach to all Michigan citizens, businesses, local governments, and State of Michigan employees
- Michigan Public Safety Communication System (MPSCS) communications interoperability

Human Capital Management and Employee Development

This initiative primarily focuses on MDIT employees and internship program participants. Professional development and job alignment improves the MDIT work environment and ultimately leads to higher productivity and client satisfaction.

Information Technology Asset Management (ITAM)

This project provides a comprehensive asset management solution to effectively manage state IT assets.

Integrated Forest Management Application (IFMAP)

The Integrated Forest Monitoring Assessment and Prescription (IFMAP) project is DNR's landscape inventory and decision support environment. A central feature of this environment is a Geographic Information System application that brings landscape inventory information and geographic analysis tools to the desktop of natural resource managers. This tool is referred to as the IFMAP Geographic Decision Support Environment (GDSE). IFMAP supports sound decision making on timber sale, so that the State of Michigan forest remains a renewable resource. This application supports a DNR revenue generating program (timber sale) and the management of the forest and its habitat.

Integrated Testing Reengineering

This project revamps the Human Resource and Payroll system testing process to make less people intensive and more efficient.

I-Services

I-services is a data sharing initiative moving towards Phase II in fiscal year 2005-2006 that allows criminal justice agencies to share data with the creation of a state managed data warehouse. Many federal, state, and local agencies are currently participating, and discussions are occurring with bordering states to link large scale state systems together for the same purpose.

Law Enforcement Agency Management System (LEAMS)

LEAMS is a computerized law enforcement system that will provide a fully automated case and records management system for the Michigan State Police (MSP) and requesting local law enforcement agencies. It is envisioned to support the law enforcement functions of case management, incident reporting, property entry and tracking, crash reporting, citation generation, limited activity reporting, and intelligence reporting.

Law Enforcement Information Network (LEIN) - Next Generation

The existing state LEIN will migrate to updated technology and platform environments. The application is used by all criminal justice agencies in the state of Michigan and connects to the federal systems of NCIC and NLETS. This multi-year initiative expands on the current MiCJIN portal for criminal justice and identity management technologies put in place for the MSP. State staff will develop a majority of the applications while utilizing best-of-breed commercial-off-the-shelf (COTS) technology and middleware products.

Lawson Upgrade

This is the migration of the human resources application system to a JAVA platform for development and production. When completed the Lawson system will be more web compatible and additional functionality.

LCMS/CODIS

Both systems are forensic laboratory COTS products to be implemented for completion in fiscal year 2005-2006. Both applications relate to the management and control of forensic evidence and DNA samples within the forensic labs. This is a federally-funded initiative to facilitate attaining certifiable labs and procedures in all states. MDIT will support both systems.

Leadership Development Program

This annual event is hosted by MDIT as a growth and development opportunity for department managers. The event, held in a conference-style setting, provides tools and training to help grow MDIT leadership.

MAIN Web Front End Hosting move to Michigan

This effort moves the support of the Web front end access to the MAIN system from an external vendor to internally State supported, generating substantial savings.

Management and Use of Independent Research Firms

MDIT Technology Research and Advisory Services (IT-RAS) group supports and manages research subscription services and consulting-related expertise that support MDIT's planning and subsequent acquisition of adding information resources. These research and advisory subscription services cross the entire spectrum of computing and telecommunications technologies, including business, management, and governmental perspectives. As part of MDIT's Technology Partnership Outreach initiative, this service is also made available for State of Michigan local units of government (cities, villages, counties, etc).

Medicaid Management Information System (MMIS)

This project replaces the existing MMIS for the state of Michigan. The Medicaid Management Information System was first developed in the late 1970's. It is a batch Cobol system running on the Bull mainframe. The object of this project is to replace it with a system that is certifiable by the federal government and is run with current software on a more current platform. This will allow the Department of Community Health to make enhancements and changes requested by both federal and state governments in a timely manner with most being done by the business area through the updating of tables. There also will be several areas online that will give the providers the necessary tools to enter claims, update their records in a provider enrollment area, etc.

Michigan Air Compliance Enforcement System (MACES)

This new system will consolidate, streamline, and replace the management functions of several current database systems to enhance efficiencies and expand federal reporting capabilities to meet EPA requirements.

Michigan Center for Geographic Information (CGI)

CGI provides leadership, technical expertise and policy for the development, use, dissemination, promotion and sharing of geographic information in the state of

Michigan. The center's mission will enable state government to more effectively and efficiently serve the citizens, businesses and other governments of the state in areas of public protection, homeland security, economic development, environmental protection and transportation. This includes Map Michigan, Michigan Geographic Framework, High Resolution National Hydrography Initiative, and others.

Michigan Child Support Enforcement System Enhancements (MiCSES)

This initiative represents the federally-mandated system for child support. It is responsible for establishing and maintaining court orders, increasing collections, and enforcement of the child support program within the State of Michigan. This system interfaces with numerous agencies and other states on an ongoing basis.

Michigan Digital Government Summit

This annual fall event fosters discussion and dialogue on the use of information technology as a strategic tool for managers, executives and policy makers throughout state and local government. Summit topics include new technologies; digital government trends; best practices; cross-jurisdictional collaboration; and policies and standards.

Michigan Environmental Results Program for Dry Cleaning (MERP)

This project will develop a multimedia, sector-specific compliance tool to establish performance measurements to quantify environmental benefits.

Michigan Information Technology Executive Committee (MITEC)

The purpose of MITEC is to advise and assist the state CIO and MDIT in addressing current business, service and technology support needs as well as develop longer-term information technology goals and strategic and tactical direction.

The state CIO chairs the council with council membership consisting of department deputy directors, administrative officers or comparable level executives or administrators from each department; three representatives from the legislative branch (house, senate and Legislative Services Bureau); and one from the judicial branch.

Michigan Land Bank Fast Track Authority Land Management System

Michigan is developing a land management system that combines information about surplus land in the state inventory with information about land parcels under the jurisdiction of local communities. This comprehensive inventory will assist in economic development by giving a "single view" of properties available for development.

Michigan Master Training Contract

This is the training section of the Michigan Master Computing Contract, which was initiated to enhance the quality of commodity IT procurements and lower overall cost to the state and other participating units of Michigan government. This reduces the cost of information technology training while improving both training quality and flexibility.

Michigan Prison Re-entry Initiative (MPRI)

The Michigan Department of Corrections (MDOC) has adopted a new model of custody and supervision for the nearly 70,000 prisoners and parolees under its jurisdiction. Dubbed MPRI, the new model is based on sound scientific research that demonstrates targeted supervision strategies coupled with carefully crafted treatment interventions to "produce sustained reductions in (offender) recidivism."

At the heart of this new offender management model is routine and reliable assessment of offender risk, needs and strength. The assessment system must not only reliably predict the offender's risk to recidivate, commit violent acts, comply with supervision rules, or abscond from supervision, but must also accurately measure and prioritize the offender's criminogenic needs that must be addressed during custody and supervision to reduce the identified risk. With an assessment tool in place that meets these criteria, MDOC will have the ability to identify target populations for specific custody and supervision strategies and treatment interventions.

Michigan Public Safety Communications System (MPSCS) 800 MHz System

The MPSCS 800 MHz system is a statewide radio system designed to provide interoperability between state, local and federal emergency services. The baseline system is designed for voice communications and consists of over 200 tower sites around the state providing for 97% mobile coverage. Over 28,000 radios rely on MPSCS with over half the radios used by local government first responders. The system was built in compliance with the industry standard developed by the Association of Public Safety Communications Officials International (APCO 25). This standard allows for multiple vendor radios to work on the system, providing for more competitive radio prices.

Michigan State Housing Development Authority (MSHDA) Re-write

This project moves the Michigan State Housing Development Authority system from an older mainframe platform onto the latest technology. Results will be better applications functionality, better applications support and more timely and consolidated management reporting.

Michigan Talent Bank (MI-Internship Expansion)

The Michigan Talent Bank is an Internet-based, self-service labor exchange system used by employers and job seekers. Job seekers can post resumes to the system or

directly search job orders posted by employers. Employers can post job orders as well as directly search resumes posted by job seekers.

The MI Internship project began in early 2005 to support the governor's plan to keep and attract students in Michigan by offering them internships with Michigan-based companies and employers. This first phase has identified all Michigan Talent Bank registered employers who have internship information on their Websites. The next phase adds functionality and allows employers to enter postings for internships and provides the means for students to search these postings for opportunities.

Michigan/1

MDIT was formed to mitigate the issues associated with the autonomy and diverse directions pursued by the individual departments and agencies when implementing information technology initiatives. Michigan/1 is one of the MDIT efforts toward achieving this objective. By establishing the framework for the utility computing environment through desktop standardization, messaging consolidation, an integrated and scalable directory service for providing authentication, and a standardized file and print environment, MDIT has developed the basis for the ability to leverage equipment, people, processes and tools.

The overall purpose of Michigan/1 is to set direction. Technical architecture standards will guide us toward operational effectiveness and efficiency. While Michigan/1 is not an answer to all of our infrastructure complexities, it is about (a) creating order around what we currently have, and (b) establishing a roadmap for future initiatives. Michigan/1 is not “net new” architecture, nor will it encompass a “forklift” upgrade. As systems are refreshed or new systems are put in place, they will be done so with the Michigan/1 vision as the guiding principle.

- The components of Michigan/1 are:
- Desktop standardization
- Directory consolidation
- Messaging consolidation
- Server centralization and/or consolidation
- Enterprise monitoring and management

Military and Veterans Affairs Strategic Plan Continuation

This effort entails upgrading key IT systems (PCs and servers) to facilitate the migration of current applications to either federal standardized applications used in other US facilities or applications developed by state staff. This will span several years.

New MERIT Award

This effort will enhance the staying power of students in post-secondary education settings by shifting MERIT payments to after successful completion of two (2) years of college or career training. It will also increase the employability of Michigan residents and expand the economy of the state.

Offender Management Network Information (OMNI)

This parole and probation tracking system will transition the department from a manual individual investigation and supervision system to an automated department-wide system.

Online Business Startup Wizard

This project will provide individuals wishing to start a business in the State of Michigan with a Web site that allows them to apply for all licenses, permits, and certificates required at one time. This will be a secure on-line service that allows for the processing of applications to multiple state agencies. Benefits from this service are reductions in time and costs and sharing of information by agencies, which ensures consistency and reduces errors.

Online Complaint Resource

Currently, there are several different forms for filing complaints about businesses or individuals. Forms must often be routed to other departments with jurisdiction (Department of State, Department of Community Health, Department of Labor and Economic Growth, etc.) for follow-up. In order to find information about businesses that have had complaints filed against them, a citizen must call or write the department. The information sent in response contains only this department's information regarding a complaint and may not account for complaints against businesses that are overseen by other departments.

Electronic interface will eliminate the need to handle thousands of forms and streamline the complaint process. This project will provide significantly better information about consumer complaints directly to the public without requiring the public to obtain information from multiple separate departments.

Personal Protection Orders (PPO) Phase II

In this joint initiative with Michigan State Police (MSP) and Department of Human Services (DHS), MDIT staff is adding new functionality to the PPO application allowing for improvements requested by DHS. This initiative is funded by DHS through grant funds for fiscal year 2005-2006.

PreK-20 Data Warehouse

Michigan lacks a uniform system for tracking children from pre-K through adult learning and into the job market, resulting in our having a limited ability to measure the success of our educational, job training, and welfare-to-work programs. To remedy this, the state will develop a data warehouse to store information about learners and job seekers collected from a variety of sources, including: student data collected and maintained by Center for Educational Performance and Information (CEPI), job training participation data maintained by Department of Labor and Economic Growth and Department of Human Services, higher education student data maintained by community college and university systems, and wage record data maintained by the Unemployment Insurance Agency. The data will be stored centrally and securely within a data warehouse. This system will allow for tracking

of students from K-12 into a post secondary / vocational training setting and then into the labor market. This system will allow for targeted study of programs and initiatives and their impact on improving grade level achievement, job placement and economic growth. This project supports data analysis recommendations in the Cherry Commission on Higher Education report.

Project Accounting and Billing

The Department of Transportation needs and intends to replace its existing legacy project accounting and billing system with a client/server-based system. This software will be an addition to the existing MAP Financial Obligation System (MFOS).

Rate Development

This initiative is to develop new rates for MDIT services consistent across all client departments, which will assist the Office of the State Budget and all departments during the budgeting process.

Return on Investment (ROI) Training

This initiative focuses on the use of a standardized ROI template for all statewide IT projects. This effort defines and promotes the use of a standard methodology to determine the ROI for State of Michigan IT projects, which will greatly enhance project prioritization.

Revenue System Replacement Project

This project is an accounts receivable system replacement for Department of Agriculture's internal department-wide accounting.

Secure Michigan

The chief information security officer (CISO) was charged with assessing the risks, threats, and vulnerabilities of state computer systems and recommending a new security framework and strategic plan including organizational roles and responsibilities for the State of Michigan government. The Secure Michigan Initiative is the culmination of Michigan's effort to meet security regulations established by the federal government.

Self-Service Stations

Customer self-service stations in Department of State branch office locations provide 24x7 access for customer self-service to a limited number of customer self-service transactions.

Service Worker Support System – Child Protective Services (SWSS-CPS)

This project supports the DHS services workers and management staff. The supported programs are Children Protective Services, Child Foster Care, Adoption and Juvenile Justice. These programs protect and serve the most vulnerable

population in the State of Michigan. New modules for accelerated structured decision-making allow for increased efficiencies sorely needed due to staffing issues. This also encompasses a rewrite of the Child Abuse and Neglect System (CANS).

Sex Offender Registry (SOR) / Public Sex Offender Registry (PSOR)

These systems will be rewritten and developed in-house to migrate away from proprietary vendor applications and to be able to attach and retrieve real-time data from the new criminal history record (CHR) system. These applications have a direct relationship to the National Sex Offender Registry (NSOR). These initiatives will be completed during fiscal years 2005-2006 and 2006-2007.

Single Sign-On

Simplify user access to the state's application systems through the use of a single sign-on portal. This portal will provide each user a single user ID and password access for entry to major application systems. Single sign-on will provide enhanced security to our computing environment and simplify our support efforts in user ID and password management.

Social Security Number Assessment and Remediation of MAIN

This project involves the evaluation of the use of social security numbers throughout the state to ensure adherence to privacy standards. This will include identity theft protection.

State Aid Payment System Infrastructure Improvements

This project will enhance the current infrastructure used by the State Aid Payment System to provide more efficient and timelier payment to schools.

Statewide e-Grants Portal

This effort will provide a single portal, statewide grant system.

Statewide Intranet

The migration of agency Internet websites to the common Vignette platform showed both financial benefits and resource savings. The purpose of this project is to migrate all of the agency intranet websites to a common Vignette Multi-Content Management System to realize the same type of benefits.

Strategic Plan Project

This plan is the result of our strategic planning process, designed for all technology professionals in Michigan's government to understand their role in successfully delivering our state's vision.

Student Employment Program

To help foster and develop the department's young talent, the student employment program provides outreach to universities and colleges around the state to recruit future employees while securing specialized training and developmental opportunities for the existing MDIT student talent pool.

Succession Planning

By identifying trends and projections for potential employee departure, succession planning is MDIT's effort to plan for continuity of operations by developing in MDIT employees the skill sets that will be required to meet future departmental needs.

Technical User Groups

Because of the specialized technical talent required in the organization, technical user groups are formed to provide MDIT's technical staff with networking and training necessary to improve the use of various applications such as java and .net. These user groups give MDIT's technical staff another avenue for learning.

Technology Tri-Corridor

The Michigan Technology Tri-Corridor (TTC) builds upon the success of the Life Sciences Corridor by incorporating advanced automotive technologies and the emerging business sector of homeland security. This allows Michigan to broaden its scope of technology and innovation while continuing to build on our state's already strong industry sectors. These three sectors can leverage grant money and support crossover research. This enables universities, industries, nonprofits and employees to combine resources and capabilities in researching, developing and bringing innovations to market, and spinning off cutting-edge businesses and high wage jobs.

Time and Expense

This effort involves the evaluation of the current state employee time keeping and expense reporting systems to determine future requirements and enhancements.

Unemployment Insurance Agency (UIA) System Re-write Phase 1 - Business Requirements Gathering

Michigan's unemployment systems will be redesigned to better share information between the tax, benefit and wage reporting components. This project replaces technology, which was incrementally developed over ten years, with a unified system architecture that will be easier and less expensive to maintain and support.

Vegetative Management System (VMS)

This system tracks vegetative changes in land cover brought about by timber sales. The system will replace the antiquated Timber Sale System, making major improvements in quality control and data analysis abilities.

Vehicle Information Integration

This technology is also related to intelligent transportation systems (ITS). Generally, the technology is to manage information about vehicles, the road traveled, area traffic signals, etc. to provide a number of applications where drivers can be informed about avoiding possible crashes, opportunities to avoid congestion, etc. Various nation wide task forces have identified hundreds of possible applications of this technology to improve transportation systems and safety.

Building these applications and employing this technology involves sharing information from internal vehicle sources (like OnStar and similar systems), from traffic signals, from other vehicles, from state and local jurisdictions, from road sensors, etc. So far, Michigan has been a leader in this technology and we are positioned well to further develop the technology with potential to generate a significant number of high tech research and technology jobs in the field.

Video Streaming

Video streaming is playing video immediately as it is downloaded from the Internet, rather than storing it in a file on the receiving computer first. Streaming is accomplished by way of Web browser plug-ins, which decompress and play the file in real time. This technology currently exists and is being used in the Michigan.gov Web site. This effort is to identify business areas that can benefit from this technology.

Videoconferencing

Videoconferencing, (also known as a video teleconference) is a meeting among persons where both telephony and video technologies are utilized simultaneously. Video teleconference communication is multi-way and synchronous, as it would be if all parties were in the same room. The State of Michigan currently has several videoconferencing rooms located in various locations and managed by different agencies. This effort consolidates and leverages videoconferencing capabilities across the state.

Vision and Values Initiative

This is an on going effort within MDIT and is coordinated with Governor Granholm's Executive Branch Values Awareness, Alignment, and Performance Management initiative. This provides guidance in aligning employees' personal values, interests and skills with enterprise values.

Vision ORS (Office of Retirement Services) - Phase III

This effort replaces outdated technology and manual systems at the Office of Retirement Services (ORS). It includes a Web front end and provides significantly better customer service for retirees. In phase III of this project self service functionality will be added to the retirement benefits system. Also, the development and on-going maintenance of this system which is currently supported by an external vendor will be in-sourced.

Voice over Internet Protocol / Voice Consolidation

The State of Michigan is evaluating a VoIP solution because of the aging of our legacy telecom system. In addition consolidating voice and data networks will reduce costs. Savings would come from long distance service savings and single network infrastructure savings.

This technology also improves productivity, such as:

- Management and support savings - one staff to manage both voice and data
- Adding and changing phones become simpler, often accomplished via a software application versus a technician visit
- Enhanced mobility, calls reach users immediately, even when out of the office

Some other benefits include:

- Eliminate the need to manage several service contracts for remote offices or mobile workers
- Soft phones can be used when traveling, installed in a laptop
- Unified messaging, advanced call routing and integration into business applications

Wireless Infrastructure

MDIT offers a wireless (WiFi) service to state employees in managed facilities. This service is ideal for sites that cannot use standard building wiring due to building codes, historical considerations, or the cost prohibition of providing wired connectivity. A few of the many benefits with using wireless are rapid deployment, easy installation, and the greatly reduced cost of network deployment. Additional requirements are SecurID authentication and a VPN to connect to the State of Michigan network.

Women, Infants and Children (WIC) - Electronic Benefits Transfer (EBT)

The WIC program rolled out an EBT pilot in Jackson County in August 2004. The "Michigan WIC Bridge Card" was issued to WIC participants, with WIC benefits accessed with the magnetic stripe portion of the card. This pilot in Jackson County will operate for a total of eighteen months.

Women, Infants and Children (WIC) System Replacement

This project replaces the existing WIC MTRAX system for the state of Michigan. The MTRAX System is a batch Cobol system that was first developed in the early 80's. The object of this project is to replace the MTRAX system with a system running current software on a more current hardware platform.

Appendix C - 2004 Metrics and Measures

Metrics and Measures – 2004 End of the Year Report

This appendix contains the results of the Michigan Department of Information Technology's (MDIT) annual analysis of the status of IT strategic planning metrics and measures. The annual report was last updated in January 2005. The next annual report will reflect the additional metrics and measures detailed in the 2006 Michigan IT Strategic Plan.

Table of Contents

Goal 1

Expand Michigan's services to reach anyone at anytime from anywhere

Major Accomplishments

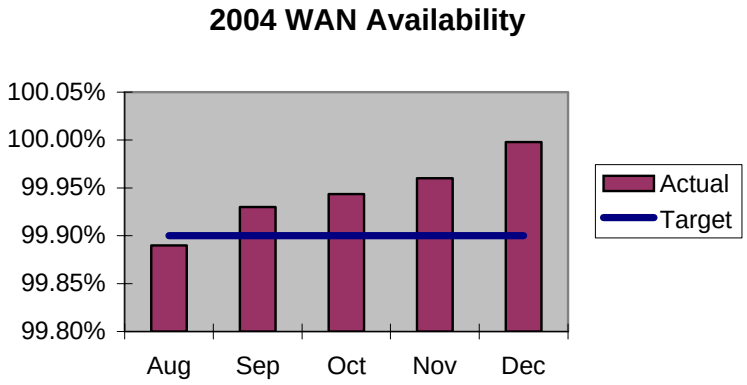
The Michigan Department of Information Technology (MDIT) recognizes the increasing demands Michigan residents are expecting of state government. It is MDIT's goal to provide safe and secure access to government services to reach anyone at anytime from anywhere. The State of Michigan has been a leader among the states in achieving this goal. With over 70% of Michigan residents using the Internet every year, MDIT has partnered with its clients to make government services more accessible by adding 45 new online services this year alone. MDIT has made these services available to citizens and businesses 24 hours a day, 7 days a week, by allowing not a single hour of Michigan.gov downtime in over two years. Additionally, through a collaborative partnership with SBC Communications in the fall of 2004, MDIT implemented the MiWiFi project which has placed wireless access points at ten Michigan state parks, welcome centers, and rest areas for citizens.

Goal 1 Metric and Measure Analysis

Michigan is currently on-target or has met 70% of the metrics and measures defined in the Michigan IT Strategic Plan for goal 1. An overview of each of these measures and their current status follows.

99.9% uptime for State of Michigan wide area network (WAN) every year

Since MDIT began to measure the wide area network (WAN) in August of 2004, the State of Michigan has seen significant improvement to the WAN uptime. Reporting for this metric is documented and measured by SBC Communications.

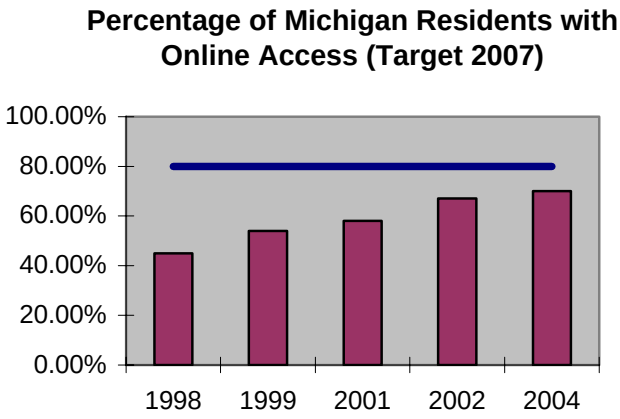


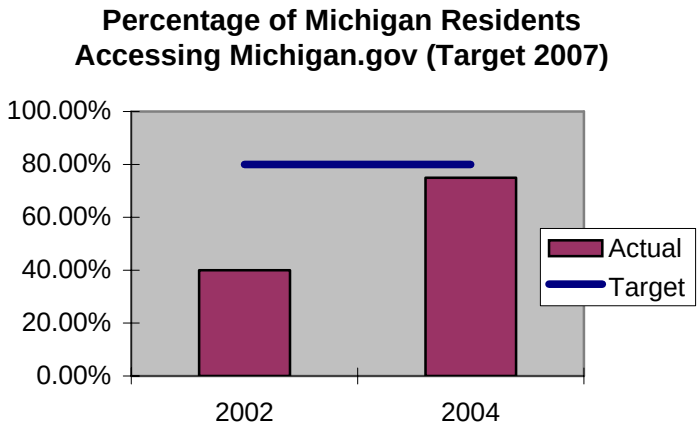
Asset management system will auto discover 90% of all IT assets within the state and link with the state's financial system by 2005

The MDIT's Asset Management product implementation began in August of 2004. Asset data has been captured and will be cleansed and validated throughout 2006.

Online services accessible to 80% of Michigan residents by 2007- even those who do not own computers

This metric was assessed by analyzing the 2004 CyberMichigan *Survey of Information Technology in Michigan* in which randomly-sampled Michigan residents were surveyed to explore the role information technology plays in their lives. The following information was taken from the survey:





A full suite of state services available online by adding a minimum of five (5) additional online services each year

The State of Michigan has sought to make government services more accessible to citizens through the use of the World Wide Web. In 2004, 45 new online services were added to the Michigan.gov Web portal. Thirty-one (31) were added in the first three quarters of 2005.

Examples of the services added include: Be Your Own Boss, Traffic Crash Purchasing System, Protect MI Child Registry, and Prescription Drug Pricing.

Broadband services available to more than 70% of Michigan citizens and businesses by 2007

Since the release of the 2004 Michigan IT Strategic Plan, Governor Granholm has charged the Michigan Broadband Development Authority (MBDA) that all Michigan residents will have affordable broadband access by the end of 2007. Current reports indicate that 89% of Michigan residents have access to cable modem service. However, this service can be too costly for Michigan residents. As a result, MBDA is working to lower costs by assisting more companies to offer broadband services throughout the state, increasing competition and decreasing costs. To date, MBDA has assisted 45 of Michigan's 83 counties decrease broadband costs.

Wireless infrastructure in place for Michigan government by 2007

As of January 2005, MDIT is able to offer state agencies the ability to use wireless capabilities in all MDIT Telecommunications and Network Management "Smart Buildings" as a rated service.

Statewide initiatives compliant with privacy audits at 90% by 2007

MDIT and its clients have chosen to allocate scarce resources to the highest priority tasks. Consequently, the focus of efforts has shifted from the completion of privacy audits to other measures that better help ensure the security of state systems and information.

Comprehensive statewide technology disaster recovery plan for critical systems finalized by 2007

MDIT is working closely with statewide business continuity planning efforts to ensure that IT systems and assets are secured for all eventualities. Resource constraints have slowed other projects related to this metric. This target will be reevaluated during the planning phase for the 2006 Michigan IT Strategic Plan.

90% of all intrusions and viruses are repairable within 2 hours

Attacks on the State of Michigan network and computers through viruses and Trojans increased by over 800% from 2003 (894,224 attempts) to 2004 (7,887,253 attempts). As a result of these increasingly common attacks, MDIT has taken steps to ensure the safety and reliability of our state's network. Currently, MDIT's Office of Enterprise Security (OES) is able to stop approximately 99.94% of all viruses and Trojans instantaneously. And, in 2005, this will only get better as OES implements additional measures to proactively improve the state's security. In January, 2005 OES implemented SurfControl and SPAM filtering. In July, 2005 OES will gain the ability to determine the second a virus attacks a state computer to ensure quick response time in removing viruses from state computers.

Statewide enterprise systems certified and accredited for proper security controls by 2006

Funding for security control certification and accreditation has been shifted to addressing higher priority security concerns. This target will be reconsidered for its priority in the next Michigan IT Strategic Plan.

Goal 2

Transform Michigan services through sharing and collaboration

Major Accomplishments

MDIT strives to enhance government services and cut costs by streamlining new and leveraged solutions for the State of Michigan. This approach has enabled MDIT to save the State of Michigan over $100 million dollars since its creation while reducing total staff by over 34%. The use of technology in agency initiatives has enhanced Michigan's ability to cut red tape, share information, and save time. For example, the Department of Human Services (DHS) stated that due to its use of technology in their child support collections, DHS was able to improve cost effectiveness by 13% and boost the overall average collection of DHS workers from $479,200 in 2003 to $536,362 in 2004. The implementation of MiTAPS has enabled state government to cut the time required to issue business permits. Specifically, the State of Michigan has been able to cut the time it takes small business to file unemployment taxes from 6 weeks to 24 hours or less – a 2400% efficiency gain

Goal 2 Metric and Measure Analysis

Michigan is currently on-target or has met 63% of the metrics and measures defined in the Michigan IT Strategic Plan for goal 2. Additionally, for this goal, MDIT is currently reassessing the remaining metrics to ensure they represent proper and realistic measures. Below you can see an overview of each of these measures and their current status.

Increase the number of data sharing agreements 25% by 2005

Priority has shifted from pursuing the multiple, independent data sharing agreements considered in the development of this target. MDIT is now focusing on pursuing the development and implementation of an enterprise data sharing and integration plan.

MDIT Information Officers are included in departmental strategic and technology planning by 2004

Information officers (IOs) are the strategy-level liaison between MDIT and our clients. They ensure that the technology direction of the State of Michigan directly aligns with the business needs and direction of every state agency. MDIT ensures the success of this alignment through active participation in the Cabinet Action Plan, Michigan Information Technology Executive Council (MITEC), Budgeting for Outcomes planning process, and participating in state agency executive management meetings.

25% of redundant system hardware is reduced or eliminated by 2007

The State of Michigan currently has identified approximately 3,000 distributed servers throughout the State. It is MDIT's goal to centralize and consolidate these servers into one of three data centers in Lansing. To-date, MDIT has been able to work with other agencies to move 1,123 servers into one of the three data centers, eliminating redundant hardware such as backup equipment and network connections.

In the 2006 planning cycle, this measure was reassessed and it was determined that by 2008, MDIT will migrate or eliminate 1,000 servers from remote data centers through centralization and consolidation in one of the three hosting centers.

95% of strategic initiatives use targeted products and architectures in 2005

Product and architecture standards have been published online and communicated to vendors as of February,2005. MDIT is currently identifying all products and architectures being used by its strategic initiatives.

Additionally, MDIT has launched the Horizon Program, a supplier outreach and education effort designed to help technology suppliers partner with the State of Michigan. This program implements a more effective process for state business partners to market their IT services and improves the ways in which the state can evaluate the potential of emerging technologies.

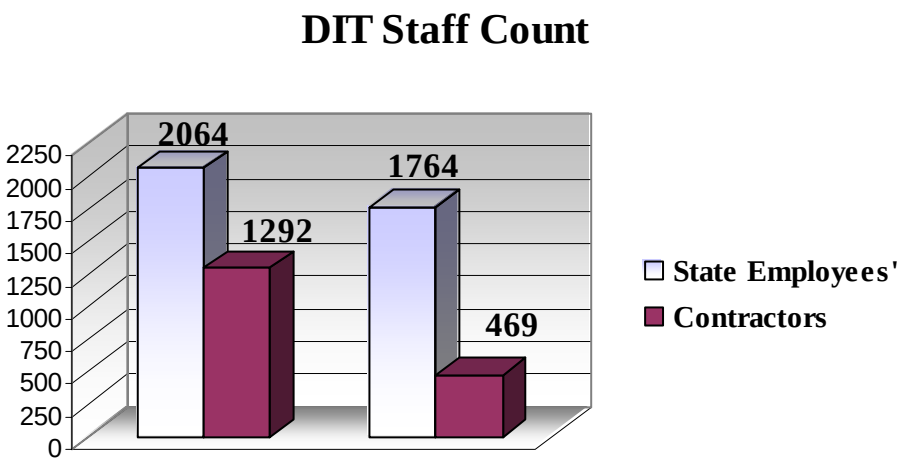
Increased sharing of data, systems, infrastructure, and applications resulting in a 20% increase in efficiency by 2005

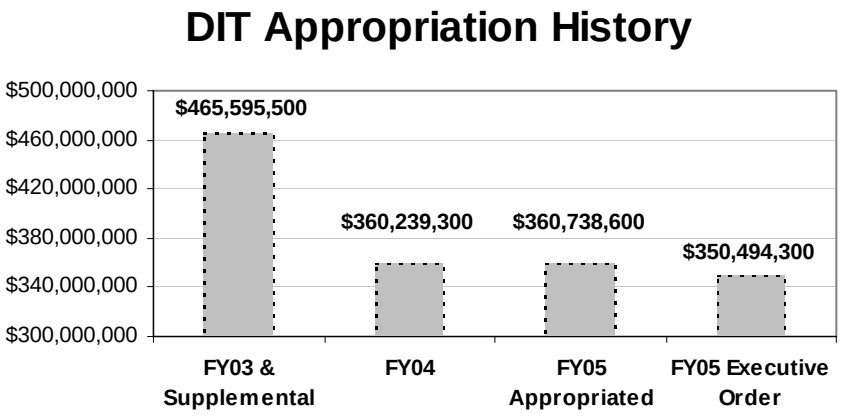
MDIT has accomplished this metric at three levels:

- Overall Savings (FTE count reductions and overall spend reductions)
- A reduction in state errors and a decrease in time
- Specific initiatives leading state government to increased efficiency

- **Overall Savings**

15% Reduction of State Employees
64% Reduction of Contractors
34% Total Staff Reductions





Total IDG spend budget reduction: $115,101,200

- **The following technology-aided initiatives have led to increased efficiency throughout the State of Michigan**

Department of Treasury – e-filing
- The Department of Treasury has increased the number of tax returns processed through e-filing by 56% from 2003 (1.551 million returns) to 2004 (2.426 million returns).

e-Michigan – Michigan.gov services
- Citizens have increased their use of Michigan.gov online services; in 2004 the average was 861,127 pages viewed per day, an increase of 19% from 2003.
- 5,362 professional licenses were renewed and paid online in March 2004, a 103% increase as compared to the monthly average of 2,254 in 2003.
- 45,056 vehicle registration renewals were completed monthly on average in 2004, an 80% increase as compared to approximately 25,000 monthly completed in 2003.
- Employer use of the Michigan Talent Bank is evidenced by the 39,000 available job openings posted on the site and 640,000 active resumes (1/31/2005).
- Internet filed unemployment claims have increased from a monthly average of 8,360 in 2003 to 20,342 in 2004

Michigan State Police – Crash Process Redesign (CPR)
- The CRASH system will save the State of Michigan $4.6 Million over the next three years. This system will provide more data for law enforcement and engineering personnel.

Michigan Timely Application and Permit Service (Mi-TAPS)
- Mi-TAPs makes Michigan a better place to do business by reducing the time it takes businesses to obtain permits and licenses.
- On average, complicated permitting processes went from taking 720 days to complete to 210 days.
- It used to take 6 weeks for a Michigan small business to register and pay unemployment taxes; now it can be completed in 24 hours or less.

Link MI Contract
- MDIT reduced the State of Michigan's telephone costs by $2,305,962 (13.78%) in 2004.

Department of Human Services – Food Assistance Program (FAP)
- Through the use of technology, DHS improved its error rate and avoided $38 million in federal fines.

Department of Civil Service - MI-HR Self Service
- The MI-HR Service Center website is estimated to save the State of Michigan $20 million over the next 5 years.

The Department of Management and Budget - MI-DEAL Website
- MDIT enabled 575 not-for-profit agencies and local units of government the ability to gain economies of scale through utilizing the State of Michigan's purchasing contracts. This is a 79% increase from 2003.

The Department of Human Services – Child Support Enforcement System

- DHS improved cost effectiveness by 13%, boosting the overall average collection by DHS workers from $479,200 in 2003 to $536,362 in 2004.

10% increase in application development and maintenance efficiency by 2005

MDIT decreased maintenance costs in 2004 by 16% and saved the State of Michigan $9.8 million dollars.

Complete 90% of messaging consolidation by 2005

The centralized infrastructure design is complete and piloted. All GroupWise post offices are the same version; all state agencies (except for Transportation and Civil Rights) are on the same address book; and 16,000 mailboxes are in process of being moved to a centrally hosted environment.

All defined "major" mission critical applications will have 99.9% server availability by 2004

MDIT has identified all agency critical applications and will complete its enterprise monitoring initiative in the spring of 2006. Enterprise monitoring will provide the state performance metrics, such as server uptime for all applications that can be included in service level agreements. However, the priority of other projects that affect this metric has fallen. As a result, this metric has been reassessed and MDIT will be able to ensure that all mission critical applications in the hosting centers will have 99.9% server availability.

Goal 3

Manage technology to provide better service and faster delivery

Major Accomplishments

MDIT ensures that all technology solutions are managed effectively to provide better service and faster delivery. It is MDIT's purpose to add value to the State of Michigan. To date, quality control processes have been put into place to build client trust, fix operational issues, empower employees, and "break down silos." Specifically, MDIT is able to ensure that all strategic-level projects are managed effectively by utilizing a monthly dashboard report mechanism to track progress, roadblocks and accomplishments. This tool has resulted in initiatives being delivered 79% on-time, 90% on-budget, and 96% in-scope. Finally, MDIT is ensuring the true value of all technology solutions by requiring all strategic-level projects and purchases be justified with a business case and return on investment analysis.

Goal 3 Metric and Measure Analysis

Michigan is currently on-target or has met 100% of the metrics and measures defined in the Michigan IT Strategic Plan Goal 3. An overview follows of each of these measures and their current status.

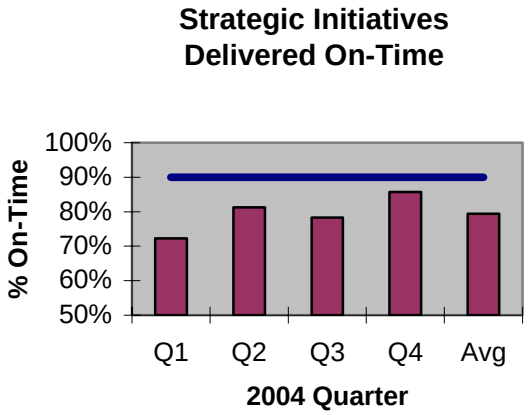
Governance process implemented statewide to enforce accountability and support project targets by 2004

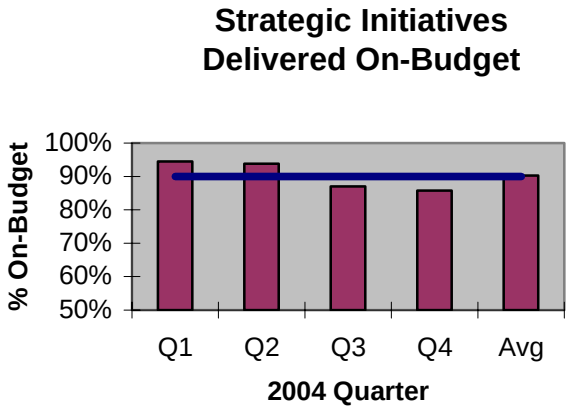
A governance process in MDIT was launched in July, 2004 that provides a formal escalation path to remove barriers, reports on progress of strategic initiatives in yellow or red status, management coordination and employee accountability.

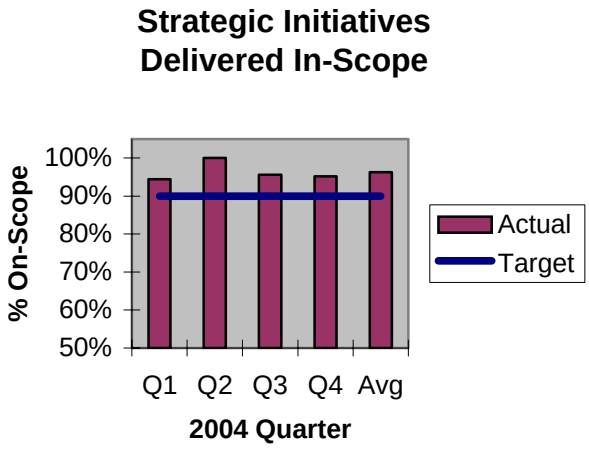
Quality control procedures in place and used consistently by 2004

The following quality control procedures in place: Governance, project board/resource planning meetings, e-Michigan review process, project dashboard reporting, targeted selection hiring, skills assessment, product standards, service level agreements, leadership forums, service delivery team meetings, IT security standards, metrics and measures, and a State of Michigan IT Strategic Plan.

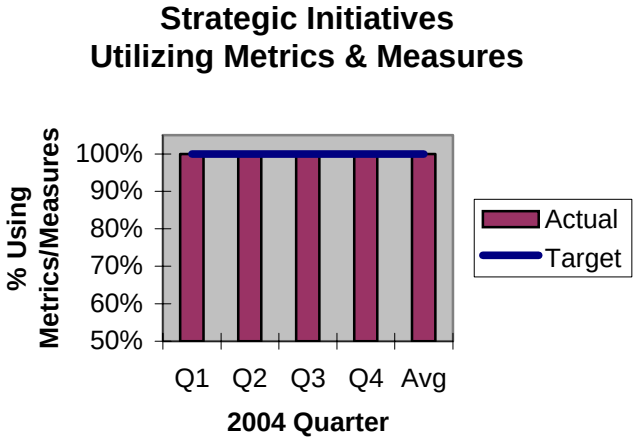
90% of strategic initiatives delivered on time, on budget, and in scope in 2005







Metrics and measures developed and in use for 100 % of strategic initiatives by 2004



Each strategic initiative will have a departmental sponsor and an IT project manager by 2004

MDIT requires that every strategic initiative has a departmental sponsor and IT project manager before project kick-off.

All Departments will have signed service level agreements by 2004

All departments have signed service level agreements effective January 18, 2005

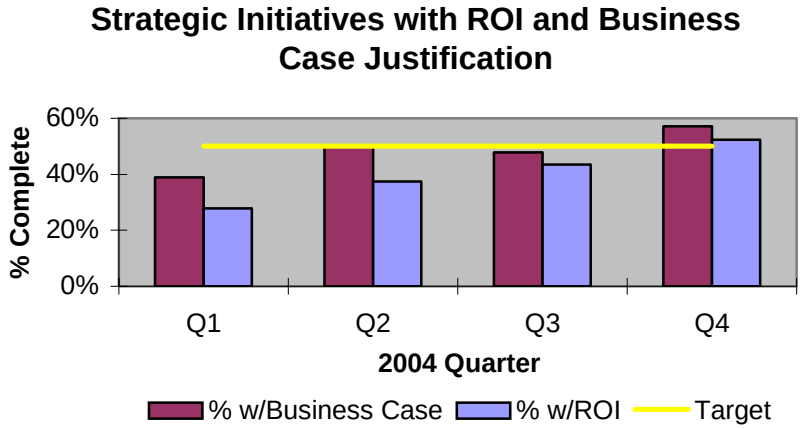
Develop recommendations for a revised IT Funding Model for MDIT by 2004

In 2004, MDIT recommended a revised IT funding model to the Office of the State Budget (OSB). This funding model was rejected, and MDIT is continuing to work with OSB to ensure a more effective IT funding model is developed for the State of Michigan.

18 month operations plan, 3 year strategic plan, 5 year technology trend horizon and staff development plan are integrated by 2005

MDIT has an 18-month operational plan that is integrated with the three-year IT strategic plan (both have rolling horizons). Both plans support agency business plans and the Cabinet Action Plan and are being integrated with the outcome budget process under development. MDIT systematically and routinely tracks IT trends, best practices and innovations, using a three to five year (3 - 5) year horizon. MDIT has developed guidelines for technology planning and management, which are continually being refined. MDIT staffs a NASCIO project identifying trends, innovations and best practices (IT, management and process design/redesign) that can support major business and customer service areas (e.g. health, economic development, environment, education, etc). The products of this activity will be utilized in the next Michigan IT planning cycle.

50% of all strategic technology initiatives are justified with business case and return on investment by 2004; 100% by 2005



IT investment standard adopted, aligning today's IT purchases with state policies and customer needs by 2004

IT product standards were published in January, 2005. Use of these standards is mandatory, and an exception process is available. Currently, MDIT uses the Michigan Master Computing Contract (MMCC) when purchasing commodities, and a committee reviews exceptions requests. In 2004, 94.19% of all systems purchased were standard.

Goal 4

Make Michigan a "Great Workplace" and the employer of choice for technology professionals

Major Accomplishments

MDIT is taking strides in making the State of Michigan a "Great Workplace" and employer of choice for technology professionals. In 2004, MDIT has implemented many new employee recognition programs to empower employees, increased the number of online training courses to provide free training during tough budget-times, put approximately 250 MDIT employees through the novice project management certification program, and has listened to the concerns of MDIT employees at quarterly town hall meetings where every employee has the opportunity to listen to and ask questions of Director Takai.

Goal 4 Metric and Measure Analysis

Michigan is currently on-target or has met 80% of the metrics and measures defined in the Michigan IT Strategic Plan for goal 4. An overview follows of each of these measures and their current status.

Competencies identified for all job roles within MDIT by 2005

In 2004, curriculum teams identified all competencies for each job role within MDIT. The curriculum team is working to identify competencies for each of the 60 job roles they identified.

A formal employee development curriculum for MDIT managers and employees implemented by 2005

In 2004, MDIT developed a formal professional development strategy as well as various curriculums. Curriculums will be living documents, changing as MDIT evolves over time. In the future, MDIT will align specific technical training to job roles. However, almost 600 technical courses are now available to choose from. The leadership strategy is on target for 2005.

Technology standards and education strategy published by 2005, allowing employees to focus training efforts on future-oriented core technical skills

Technology standards were published in January, 2005. Additionally, MDIT is in the process of finalizing a training and education schedule that aligns to the published technology standards.

Increase usage of internships by 15% in 2004

Due to continued department-wide staffing reductions, MDIT was unable to meet this metric. As of the last quarter in 2004, MDIT had approximately 17% fewer internships than in 2003. MDIT hopes to offer more opportunities to students throughout the State of Michigan.

Employee satisfaction improved as evidenced by feedback in town hall meetings and surveys

Every six months, the MDIT conducts a series of town hall meetings across the state in an effort to reach out to all MDIT employees. Director Takai facilitates the town hall meetings, and various members of her executive team accompany her to each meeting. The purpose is to share departmental news and to allow MDIT employees to ask questions of the director and executives. It is an open and honest forum where the director will respond to anything the employees want to discuss. The first few rounds of town hall meetings conducted in 2003 resulted in questions that focused on employee dissatisfaction with the formation of MDIT and employee frustration with operational issues within MDIT. During the most recent round of town hall meetings conducted in October of 2004, the questions and comments were much more positive in nature. The pay for performance issue, once the major topic of concern, is now resolved. In the year to come, MDIT plans to implement a formal survey of the town hall meetings attendees to ensure a quantitative analysis of employees' satisfaction.

Goal 5

Create a statewide community of partnerships

Major Accomplishments

MDIT is looking beyond standard state IT roles and responsibilities and reaching to define partnerships between citizens, local governments, educational institutions, and businesses. MDIT believes by developing these synergies, Michigan will be able to question old methods and practices. In 2004, MDIT made strides to make this vision a reality. Through the newly-created Office of Technology Partnerships (OTP), MDIT has enabled approximately 200 not-for-profit agencies and local units of government the ability to gain economies of scale through utilizing the State of Michigan's IT purchasing contracts. Additionally, this year, MDIT hosted its second nationally-recognized "Michigan Digital Government Summit." This two-day event provided opportunities for public and private sector IT organizations to exchange ideas and learn about new and innovative technologies.

Goal 5 Metric and Measure Analysis

Michigan is currently on-target or has met all metrics and measures defined in the Michigan IT Strategic Plan for goal 5. Below you can see an overview of each of these measures and their current status.

Partner to establish two (2) cross-governmental technology forums, seminars or conferences each year.

In 2004, OTP reached out to other governments through the State and Local Government Collaboration meeting (August, 2004) and the Michigan Digital Government Summit (October, 2004).

10% increase in number of local governments using state master purchasing contract by 2005.

In 2004, local government participation increased in both the number and volume of purchases. Total purchases by local units of government and other non-profit organizations via the state's master IT purchasing contract grew from $8.9 million to $14.3 million. Approximately 200 separate organizations participated, completing more than 400 transactions.

10% increase in number of universities using state master purchasing contract by 2006.

OTP is on-target and working diligently to ensure this metric is met by 2006.

Create two (2) new forums for engaging private sector knowledge to help solve the state's technology challenges by 2004.

OTP created several forums to engage private sector knowledge. Two of these include NOREX (May, 2004) and Cyber-State Advisory Council (Spring 2004).

Create a local government technology collaboration group by 2004

OTP created three state and local government collaboration sub-groups that include: communications sub-group, security sub-group, and local websites sub-group.

Participate in National Association of State CIO's (NASCIO).

MDIT feels its role in NASCIO has been influential in developing robust centralized IT department for the State of Michigan. Currently, MDIT membership in NASCIO includes:

Government and Transformation
George Boersma (Vice Chair)
Andris Ozols

Programs
George Boersma

Awards
Andris Ozols

Information Security
Teri Takai (Vice Chair)
Dan Lohrmann

Implement 2 new, cross-government projects each year.

MDIT has implemented many cross-government projects in 2004. Specifically, MDIT has implemented MiWiFi, Wayne County - Connecting the Partners, MPSCS radio system, and Family Resource Centers.

Appendix D - External Stakeholders

External Stakeholders

Table of Contents

Michigan Information Technology Executive Council (MITEC)

The Department of Information Technology (MDIT) has established the Michigan Information Technology Executive Council (MITEC). MITEC is a further extension of MDIT's responsive, partnered and accountable commitment to providing quality services to its clients and customers.

The purpose of MITEC is to advise and assist the state CIO and MDIT in addressing current business, service and technology support needs, as well as to develop longer-term information technology goals and strategic and tactical direction. The council will be directly involved in IT support and service priority setting, planning, resource alignment and budgeting activities.

Authorization

MITEC is established by the state CIO, based on existing Executive Order authority, including EO 2001 – 3.

Purpose and Objectives

MITEC is an advisory body to the state CIO in the planning, development, implementation, and management of state government wide, as well as department IT services and solutions. These responsibilities include providing advice on the development of Michigan's long-term information technology vision and goals, and enterprise IT strategic and tactical direction and priorities. MITEC provides a leadership forum and governance structure for discussing issues that have common or universal interest for the executive branch agencies, as well as the legislative and judicial branches.

MITEC's responsibilities include identifying business and customer service needs; assisting MDIT in providing responsive and timely services; and developing and recommending strategies and actions to the CIO for guiding enterprise and MDIT support of department missions and business, management and customer service needs. MITEC is a forum and environment in which agencies may surface their IT-related issues to ensure that those issues are acted upon in a responsive and timely manner. MITEC is also established to foster a better understanding among public officials, administrators and staff of the role of information technology and its proper relationship to agency service provision and management and to make significant contributions to the improvement of the administration of state government for the benefit of the general public.

How MITEC Fulfills this Responsibility

Agency and state service needs, MDIT support and responsiveness

- Serve as a customer advisory/coordinating body to the CIO and MDIT.
- Assist MDIT in identifying critical statewide and agency-specific IT service and management issues, and collaboratively identify, develop and implement solutions

Enterprise vision, goals, strategies, priorities and policies

- Advise on the development of Michigan's long-term information technology vision and goals
- Advise and assist the CIO in setting the enterprise IT strategic and tactical direction and priorities, in congruence with department business and service needs
- Assist in defining and supporting IT-related standards, policies, and procedures including, but not limited, to enterprise architecture, security and procurement

Planning, resource alignment and budgeting

- Assist and participate in the development of an enterprise / agency integrated IT planning and budgeting process and a state information technology strategic plan integrated with agency business and IT plans
- Participate in the development, submission, passage and implementation of the enterprise IT budget in congruence with agency budget development, submission, passage and implementation
- Strive to develop a consensus and an integrated IT business case among agencies before presenting or submitting IT-related proposals through the budget and other decision-making processes

Membership

The state CIO chairs MITEC with the membership consisting of deputy directors, administrative officers or comparable level executives or administrators from each client department; three representatives from the legislative branch (House, Senate and Legislative Services Bureau); and one from the judicial branch.

Business Sessions and Meetings

MITEC meets at least six times per year for regular business sessions and may convene periodically for ad-hoc meetings on specific topics.

Decision Making

Recommendations to the CIO are made by consensus of those present at each meeting. If consensus cannot be reached, the pros and cons of opposing arguments will be submitted in writing to the CIO and documented in the minutes.

MITEC Subcommittees

As part of MITEC, subcommittees have been formed that are specific to certain areas. These subcommittees are responsible for addressing issues and making recommendations on a statewide basis. Subcommittees include:

- Standards
- Security
- Rate Structure
- Project Management

CyberMichigan

Information from http://www.cyber-state.org

About CyberMichigan

CyberMichigan originated in 1998 under the name of cyber-state.org as a result of a recommendation from the Michigan Information Technology Commission (MITC), a group convened by the W.K. Kellogg Foundation, The Herbert H. and Grace A. Dow Foundation, and the Council of Michigan Foundations. In their ground-breaking report, the commission called for an independent entity responsible for providing on-going analysis and long-term guidance on the direction of information technology in Michigan.

CyberMichigan is focused on bringing together the private, public, and non-profit sectors to work with communities so that all of Michigan's citizens and organizations have quality access to information and communication technologies (ICT) and the knowledge to maximize the use of these tools.

CyberMichigan's mission is to inspire and promote new levels of objective research, analysis, collaboration and entrepreneurship in the field of information and communication technology to make the promise of ICT realizable to every Michigan citizen.

CyberMichigan Vision, Mission, Goals, and Origins

Revised 2005

Vision

Michigan becomes a world leader in developing and applying information and communication technologies (ICT) that improve the health, economic well-being, and educational achievement of every Michigan citizen.

Mission

CyberMichigan will inspire and promote new levels of objective research, analysis, collaboration, and entrepreneurship in the field of ICT so as to make the promise of ICT realizable to every Michigan citizen.

Goals

- Increase citizen access to, and familiarity with, ICT tools and resources
- Continuously explore and demonstrate how ICT tools can be optimally applied in the healthcare, entrepreneurship / economic development, e-government, and education domains
- Support ICT entrepreneurship throughout the state of Michigan

Program Highlights

- Michigan Consumers and Information Technology in Health Care (current)
- Michigan Entrepreneurship Education Network (current)
- Michigan Health Information Network (current)
- Guidelines for All-literacy Websites (2004-present)
- Workshops: Connecting Citizens to Online Local Government (2002-2004)
- Technology in Education Alliance for Michigan (TEAM) (2001-2004)
- Michigan Information Technology Advisory Group (MITAG) (2001-2003)
- Michigan Community IT News Briefings (2001-present)
- SBC Excelerator Awards Program (2000-2002)
- AmeriCorps: Technology Education and Access in Michigan (2000-2003)
- Michigan Online Local Governments (1999-2004)
- Survey of Information Technology in Michigan (1998-2004)

CyberMichigan's Role as an Information and Communication Technology Advisory Council

The CyberMichigan Board advises and provides counsel to the governor and state CIO regarding the long-term direction that will enable Michigan to implement the best information technology management and service practices, serving and supporting citizens and other customers, as well as critical state functions. In addition to advice and counsel, the board also assists MDIT on major state ICT related issues, programs and initiatives, processes, products and services.

Issues, trends and best practices

- Assist in the identification and assessment of service, business and technology issues and trends
- Assist in identifying best practices and solutions from the private and public sectors, and advise on the implementation and integration of such practices within state government

Service and solution forum

- Serve as a forum for the current and future role and contributions of ICT to Michigan citizens, government and business services, including education, economic development, health care, environment, cities and urban areas, homeland security and other core government services

Statewide assistance, support and collaboration

- Identify, advise and support public and private, including intra and inter-governmental partnerships and sharing of information, solutions and resources

- Foster and promote positive relationships between the state and public and private sector IT service providers based on teamwork and shared objectives
- Establish work groups or task forces to assess, address and recommend actions on and solutions to ICT and technology related matters under the purview of the board

Advice, counsel and assistance to the CIO's intra-agency and enterprise advisory committees

- Provide counsel and assistance to the MITEC on major state ICT related issues, programs and initiatives, processes, products and services

Appendix E - Architecture

Michigan Enterprise Architecture Work Plan Guidelines

Table of Contents

Overview and Highlights

Overview of Guideline Materials

The following materials represent guidelines and the work plan for the refinement and maturation of Michigan's enterprise architecture. Michigan will have an enterprise Architecture Plan developed in 2006, formalizing the current enterprise architecture practices, and addressing performance, business, technology, data and information services as well as related management components. Specifically, the plan will address enterprise business architecture (EBA), enterprise information architecture (EIA), enterprise technology architecture (ETA), and assess the potential and requirements for a service oriented Architecture (SOA).

A particular emphasis will be placed on cross-boundary information and service sharing and interoperability, as well as transformation of government. The Enterprise Architecture Plan will be integrated with the Michigan Cabinet Action, Michigan IT Strategic, and Agency Services plans.

The development of an Enterprise Architecture (EA) Plan is one of the 2006 Michigan IT Strategic Plan foundations along with Cyber Security, Finance and Human Services, IT Procurement and Statewide Communications. These provide the necessary foundation to both improved state operations as well as the new and innovative Michigan enterprise approaches to IT such as the 7 enterprise solutions.

The Michigan EA Plan will support several state goals and strategies, including the Cabinet Action Plan goal of "Better Government" and the IT Strategic Plan goal three "Manage Technology and Provide Better Service and Faster Delivery". Specifically, the EA Plan supports the strategy to "implement consistent and supportable architecture and standards". This is a repeatable process that includes on-going refinement.

EA Plan Guideline Highlights

The guideline materials consist of three EA components, (1) a description of the EA process, (2) an EA framework and, (3) the Michigan EA work plan elements.

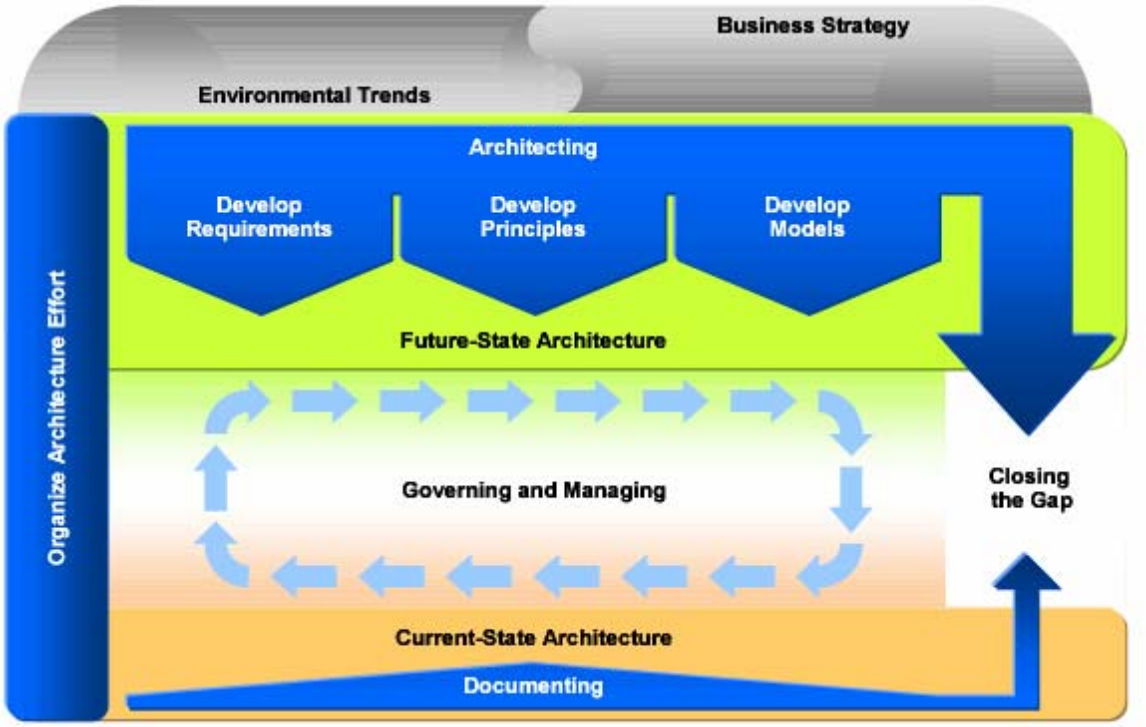
- **EA Process:** A description of the process model, eight process activities and coordination and integration requirements. The materials are based upon and in part excerpted from the Gartner EA Process Model, particularly "Gartner Enterprise Architecture Process: Evolution 2005".
- **EA Architecture Framework:** Description of framework considerations and requirements, enterprise architecture viewpoints (Business, technology, information and services), enterprise solution approach and requirements, and governing, managing and accountability. The materials are based upon and in part excerpted from "Gartner Enterprise Architecture Framework: Evolution 2005", "Architecture Frameworks: Some Options", and "NASCIO EA Development Tool Kit", Version 3.0.
- **EA Work Plan:** Architecture management best practice guidelines and activities.

EA Process

According to Gartner, successful EA programs are process-focused. EA is a process discipline. Done well, it becomes an institutionalized part of how an organization makes decisions to direct its investments, such that the chosen business strategy will be realized. The EA process bridges the gap that otherwise exists between business strategy and technology implementation.
The Michigan EA Plan development process will follow these principles, starting with a process orientation and a solid grounding in the business strategies of the state government. The following section describes some of the process steps that will be used in refining and maturing the Michigan Enterprise Architecture.

Process Model

The following graphic (Figure 1) describes the Gartner EA Process Model being used by the State of Michigan as guiding principles.



Source: Gartner (October 2005)

Figure 1: Gartner EA Process Model

Process Guidelines and Activities

Environmental Trends

Business architecture needs to start with an environmental context. That is, a contextual understanding of what is going on economically, politically, and in the way of citizen expectations. This includes identification and understanding of the trends, changes, market forces, fiscal and monetary policies and their immediate and latent effects on the economy, availability of capital, and labor. It is important to realize that information technology is not only a tool for government, but also a driver for transforming the operations of government. The Michigan IT Baseline, Opportunity and Gap Analysis currently under review represent a beginning step in this process.

Business Strategy

The EA must support and reflect the business drivers and strategies of the enterprise. For Michigan this means the Cabinet Action, Michigan IT Strategic and Agency Services plans. One of the important points to note is that EA, while dependent on business strategy, is also an enabler of business strategy as it evolves into a more mature process and set of deliverables. EA enables business strategy by providing a set of models that depict the state of business, information and technology architecture in the enterprise, making it easier to conduct impact and scenario analysis.

Organizing the Architecture Effort

A properly resourced and well-run EA program is essential to achieving and communicating the promised benefits. The architecture effort must be properly scoped, resourced and executed, and its goals and accomplishments must be communicated effectively. This phase in the process may appear to be a one-time effort at the beginning of an EA program. While this is certainly required at the beginning of an EA program, at least part of the phase must be repeated under some conditions. The EA process must be performed in iterative fashion.
Sections II. C on “Process Integration” and IV on the “Work Plan” address these requirements.

Future State Architecture

Architecting the future state of EA is the heart of the entire process. The goal is to translate business strategy into a set of prescriptive guidance to be used by the organization (business and IT) in projects that implement change. Future-state architecture produces the following classes of work products:

- Requirements — Express the needs of the enterprise
- Principles — Provide high-level guidance for decision making
- Models — Illustrate future-state architecture in greater detail to guide more-detailed decision making

As a general rule, future-state architecture is developed before the current-state architecture for given EA viewpoints or areas within viewpoints (although there are exceptions to this rule).

Current State Architecture

Understanding and documenting current-state architecture is necessary to proceed with plans to close the gap between current and future states. The purposes for documenting current-state architecture are to:

- Provide an initial baseline to compare against the future state
- Help identify dysfunctions, duplications, complexity and dependency
- Facilitate continual updating of infrastructure documentation
- Serve as reference material

Scoping the current-state documentation based on future-state architecture helps answer the following questions about applications, infrastructure and standards:

- Do they support future-state IT requirements?
- Are they consistent with the enterprise position on technology/technology market trends?
- Are they aligned with the design principles?
- Identify technology requirements that are not met by technical infrastructure. These are the gaps.

Analysis and Closing the Gap

Gap analysis is the step of the EA process that seeks to identify differences between current-state and future-state specifications from the EA deliverables. The following key inputs are required (although not exclusively) to effectively identify, analyze and propose recommendations:

- Business solution requirements from the common requirements vision
- Conceptual architecture principles
- Future-state specifications
- Future-state architecture models and artifacts
- Documentation of the current-state architecture

The gap analysis phase specifies the following steps to use the inputs:

- Identify and classify gaps (cultural, structural and functional) — in this step, differences between current-state and target architecture are identified and classified accordingly.
- Analyze gaps — Different tools are used to understand the difference between the current state and the target.
- Develop recommendations — Actions are proposed to close the gaps. Different scenarios may be considered to close these gaps.
- Prioritize recommendations — Illustrations of interdependencies and priorities are completed to fulfill the recommendations to close the gaps from the scenario list, as warranted.

Governing and Managing

Governing refers to the processes and organizational structure, along with their associated input and decision rights, that guide desirable enterprise behavior. Managing refers to the discipline of creating and maintaining EA artifacts. Some of the requirements for this part of the process are discussed under II. D "Governing, Managing and Accountability."

Process Integration

EA is a proactive analytical process that supports strategic alignment, information gathering, governance, direction and control; plus, it facilitates intra-organizational communication, cooperation and sustained strategy realization. EA should not happen in isolation. To be effective, it must link IT planning, management and oversight as well as solution development. Some of the elements to be integrated include:

- **Strategizing and Planning:** Identify the business strategy, create or refine an IT strategy, evolve the architecture process
- **Architecting:** Develop the to-be architecture, document the current architecture, identifying gaps, develop a road map
- **Governance:** Link to portfolio management, investment management, life cycle management and related processes
- **Leadership:** Educate, mentor, train and develop staff
- **Communications:** identify stakeholders, develop the value proposition, evangelize

Figure 2, the "Gartner EA Activity Map," identifies and describes some of the activities that must be coordinated and integrated. The work plan guidelines cited in Section IV include the development of provisions that ensures this coordination and integration.

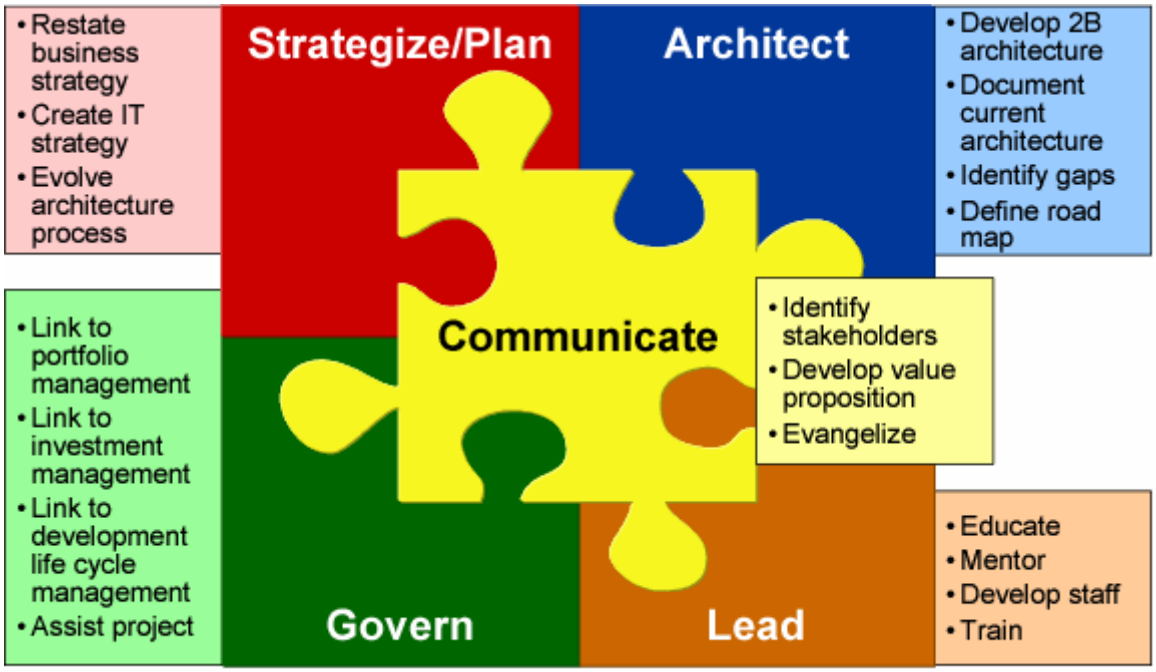


Figure 2: Gartner EA Activity Map

Michigan Enterprise Architecture Framework

Framework Requirements

The ***Enterprise Architecture Framework*** refers to the overarching structure that addresses all of the elements of the Enterprise Architecture. Additionally, it defines the interrelationships between these elements in a consistent and organized fashion. Many different architecture frameworks are available today (e.g. Open Group Architecture Framework and Zachman), but no single framework necessarily meets all of the EA initiative needs. However, there are some common criteria that are useful in selecting suitable aspects from frameworks. These are also the principles that Michigan has used in borrowing features from the Gartner, NASCIO and other frameworks. The framework should:

- Be readily understandable and helpful as a communications tool
- Be consistent and structured
- Should make a "top down" approach simple and natural
- Incorporate a variety of constructs at multiple levels of abstraction
- Define a process for developing the architecture
- Describe the artifacts that will be produced

Additional advantage is obtained if the framework also includes guidelines for embedding the architecture in the planning and development processes of the organization. Guidelines on possible governance processes and structures can also be useful, as can suggestions for communicating the contribution made by the architecture.

Enterprise Architecture Viewpoints

Excluding the Enterprise Solution Architecture Framework (ESAF), which is a "architecture of architectures", both the Gartner and NASCIO frameworks describe three primary viewpoints: enterprise business architecture (EBA), enterprise information architecture (EIA) and enterprise technology architecture (ETA). Each viewpoint represents the concerns central to a specific set of stakeholders. EBA represents the process and organizational concerns of business architects, the EIA represents the information flow and information modeling concerns of information architects, and the ETA represents the technical implementation and operational concerns of technical architects.

Additional viewpoints may be "extracted" and called out explicitly if there is a requirement from specific stakeholders to do so. For example, currently there is a wide ranging discourse on the requirements and benefits of Service Oriented Architecture (SOA). The Michigan EA work plan calls for refining and maturing the first three viewpoints and assessing SOA potential.

Business Architecture

Description:

Business Architecture provides the high-level representation of the business strategies, intentions, functions, processes, information and assets critical to providing services to citizens, businesses, governments and the like. The Business Architecture Framework provides the structure for the collection of detail regarding the motivations, organization, location, events, functions and assets that define the direction of the enterprise from the business perspective. The detail captured within the Business Architecture supports business decision-making by providing documentation of where the enterprise is today and where the enterprise wants to be at a specified time in the future.

Business Architecture can be viewed as the foundation or driver for the other components of an Enterprise Architecture. For enterprise architecture to be successful, it must be linked to the business direction of the enterprise. Business architecture must also consider interaction with other governments, as well as delivery of services to citizens of other governments. Business Architecture includes this aspect as business interactions.

Selected Michigan Activities and Building Blocks

- Integration of the Michigan IT Strategic Plan with the Cabinet Action Plan, now in the second year
- Development of the first Agency Services Plan
- Availability of the Government Performance Project assessment and documentation information base on Michigan business and management practices, in a comparative national context

Technology Architecture

Definition / Description:

Technology Architecture is a disciplined approach to describing the current and future structure and inter-relationships of the enterprise's technologies in order to maximize value in those technologies. The Technology Architecture Framework provides a sound set of structured processes and templates to support implementation and communication of the Technology Architecture. The mapping of the technology products and standards to the Business Drivers is vital to align the overall enterprise direction. Vendors, employees, and business users can benefit from an understanding what technology standards exist and where these standards can be found.

Technology Architecture provides a framework, based on business needs that are aligned with technology, for developing technology solutions that operate across agencies and align with the business needs of state and local governments.

Selected Michigan Activities and Building Blocks:

- Strong enterprise perspective and coordinative, shared service authority for MDIT, with a strong history of coordinated and consolidate technology assets
- Established, strongly developed technology architecture and standards

- Expanded planning horizon and proactive assessment of technology options through the Horizon program
- Seven enterprise solution initiative: Mobile worker, data sharing and integration, enterprise contact center, citizen self-service transactions, collaborative tools, shared administrative services, infrastructure coordination and integration

Information Architecture

Description:
Information Architecture is the compilation of the business requirements of the enterprise, the information, process entities and integration that drive the business and rules for selecting, building and maintaining that information. Information Architecture addresses the informational needs of the enterprise. The information architecture aligns business processes to information systems that support these processes. Using the set of business processes that provides a view of the functions of the enterprise, the Information Architecture will give the organization a high level representation of its critical data. It also promotes information sharing and exchanges across agencies and boundaries.

The detail captured within the Information Architecture clarifies business relationships and enhances understanding of the business rules the enterprise has adopted. This understanding forms a baseline for exploring and implementing changes in how business is done, and what business rules the enterprise will adopt.

Selected Michigan Activities and Building Blocks:

- Data sharing and integration initiative component of the seven enterprise solutions
    - Data Warehouse Framework
    - K – 20 Tracking System
    - Fusion Intelligence Center
    - Other
- Selected cross-boundary initiatives
    - Health Information Network
    - E-Procurement
    - Local government portal development, coordination
    - Other
- Michigan.gov portal refinement
- Emphasis on the role of information in the Infusion Strategies

Service Oriented Architecture

Among the most powerful changes driving the future of architecture are the demands for improved business and service performance, including overcoming the disadvantages and shortcomings of IT that have hindered its potential. A popular IT term currently is "service-oriented architecture" because it promises to make a breakthrough in the ability to develop applications quickly, and to enable those applications to be agile. The term "SOA" is being widely adopted and used in many ways by both users and vendors, yet it is centered on architecture, which is central to its potential.

SOA appeals to organizations because of the image of creating an application by merely assembling a series of pre-defined component services to perform the task at hand. It is particularly appealing when the components are not typical software functions, but rather, individual business tasks or services — thus tailoring the process to the direct needs of the business — also known as a service-oriented business application (SOBA). SOA promises capabilities for rapid development and quick updates to applications in response to business needs, thus overcoming the complaint that IT inhibits the business (**Source:** "The Future of Enterprise Architecture: Major Demands Ahead ", Gartner, December 8, 2005). The Michigan EA Plan will include an assessment of SOA potential and requirements.

Enterprise Solution Architecture Framework

Solution Architecture is a process within the Enterprise Architecture that focuses on the development and implementation of a solution or service being created for the enterprise.

The Solution Architecture framework is a combination of structured processes and templates that utilize existing architecture documents (such as business, information, and technology components as well as models and patterns) to design a desired business solution. The Solution Architecture framework, by allowing the development of a Solution Set, facilitates the rapid development and delivery of a solution in a systematic and well-disciplined manner.

The ESAF deals directly with arguably the single most important and challenging architectural issue: combining and reconciling the loosely coupled and often conflicting viewpoints of the primary stakeholders into a unified architecture for an enterprise solution that actually solves a business problem without creating other, even larger, problems. It is the "architecture of the architectures".

Governing, Managing and Accountability

EA is and must be treated as a program. Projects have defined start and end dates, and are measured on the effectiveness of a specific implementation (e.g. deliverable effectiveness, on-time delivery, delivery within budget, etc.) EA is an ongoing effort. Once developed, the architecture is kept vital through on-going reviews and updates, allowing the organization to prepare technology plans based on business and technology drivers.

Using program management principles to administer EA assures:

- Creation of a viable EA Framework (structural elements such as Architecture Governance, lifecycle processes, integration with procurement, communications, IT strategic planning and other core management activities)
- Documentation of architecture blueprints (content) that provides value to decision-making authorities
- Design of enterprise solutions that leverage existing assets, knowledge, configurations and infrastructure
- Evolution of the program through continuous improvement and refinement of the EA program and content.

- Establishment of sound performance provisions such as the federal Performance Reference Model (PRM)

Architecture Governance addresses the governance roles and processes required for maintaining Enterprise Architecture. The Architecture Governance Framework is used to create a sound governance model to support implementation and management of the architecture as necessary to ensure the enterprise achieves its objectives. The architecture governance framework must be resilient enough to allow for those in primary governance roles to learn and adapt, manage the risks, and appropriately recognize opportunities and act upon them.

Work Plan: Architecture Management Best Practice Guidelines and Activities

The following work plan guidelines and activities are based on Gartner and Forrester research and advisory services best practices, NASCIO guidelines, the FEA PMO 2005 Action Plan and selected state management practices. These will be incorporated in a formal work plan and integrated with the EA process activities described in Section II. The Michigan Enterprise Architecture Plan is to be developed by the end of CY 2006.

- **Value Proposition:** Refine the Michigan EA Value Proposition to agencies and the cross-boundary IT community.
- **Change Management:** Establish a change management process and calendar.
- **Communications Strategy:** Develop and implement an initial communications strategy and plan, communicating the role of EA and setting expectations of individuals participating in the process.
- **Stakeholders and Governance Provisions:** Identify the full range of stakeholders, including potential cross-boundary partners and refine governance provisions. Establish a plan for setting up a governance mechanism.
- **EA Leadership:** Identifying the EA leader or chief architect.
- **EA Team:** Build and charter the "EA team," which will own and facilitate the EA process and establishing clear roles and responsibilities.
- **Align EA with Core Planning and Management Processes and Priority Projects:** Align EA with Strategic Planning, project and portfolio management, procurement, other core management processes and priority projects.
- **Performance and Accountability:** Align with the CAP, IT Strategic and Agency Services Plan goals and strategies and link to the associated performance and accountability provisions. Define EA related measures of success to articulate value delivered.

The guidelines are based upon and in part excerpted from best practice process and framework as well as planning materials developed by the Gartner and Forrester research and advisory services, NASCIO and other government entities such as the U.S. Office of Management and Budget, as well as other states. Major sources utilized in developing these guidelines include:

- "The Future of Enterprise Architecture: Major Demands Ahead", (Gartner, December 8, 2005)
- "Gartner's Enterprise Architecture Process and Framework Help Meet 21st Century Challenges", (November 8, 2005) and associated briefs, which represent a synthesis of Gartner and META approaches. The materials utilized from this series include:
    - "Gartner Enterprise Architecture Process: Evolution 2005", (October 21, 2005)
    - "Gartner Enterprise Architecture Framework: Evolution 2005", (October 25, 2005)
    - Enterprise Architecture Improves IT Planning Synergies", (October 31, 2005)
- Architecture Frameworks: Some Options", (Gartner, November 22, 2004)
- Architecture Frameworks: How to Choose", (Gartner, November 19, 2004)
- "NASCIO EA Development Tool Kit", Version 3.0, October 2004
- "Enabling Citizen - Centered Electronic Government: 2005 – 2006 FEA PMO Action Plan", (OMB, March 2005)
- "FYO7 Budget Formulation: FEA Consolidated Reference Model Document", (OMB, May 2005)

Appendix F - Cyber-Security

Securing the State Of Michigan Information Technology Resources

Table of Contents

Executive Overview

The headlines say it all: "Internet attacks increase in number, severity." "Phishing attempts at record levels." "40 million credit card numbers hacked."

Professional criminals, not bored teenage hackers, are now the source of the most serious security threats. These threats require swift action and preventive measures. It is not just consumers who are at risk. On an average day, the state blocks 22,059 spam e-mails; 21,702 e-mail viruses; 4,239 Web defacements; and six remote computer take-over attempts.

Government today must balance the need for a citizen-centered e-government with the need to secure mission critical data and information. The challenge grows. With the increase in cyber crime, hacker attacks, threats from terrorists, and concerns about privacy, data confidentiality, integrity, and availability as well as strong and flexible authentication and authorization methods are critical to securing information, increasing efficiency, and reducing cost.

With more demand from remote workers, citizens who expect 24/7 access to information and services and increased federal requirements for protecting data both in storage and in transmission come the need for more robust security management systems. The State of Michigan has won awards in the area of cyber-security with its mature architecture model.

To date, the State of Michigan has instituted or initiated several projects to reduce vulnerabilities, including:

- Digital video manager equipment to provide physical security at three critical IT data centers
- Tools to monitor firewalls, intrusion detection systems, networking devices and other applications, searching for threat patterns
- Scanning systems that identify threats on the wired network and detect rogue or unauthorized wireless access points that may have been installed
- Authentication and access control projects that filter e-mail and help manage spam and viruses coming into the network
- Zone 3 fire walls have been implemented at each hosting center.

Additionally, the state seeks to educate the public on ways they can protect themselves from identity theft, computer viruses, fraud and other risks. A new Web portal - www.michigan.gov/cybersecurity - was launched with tips on how citizens can protect confidential information, physical security and other security best practices.

Importance to Citizens, Businesses and Government

With the increasing demand for citizen-centered e-government and online services, one of government's most important responsibilities is securing sensitive information. These requirements, along with the ability to share information inter- and intra-agency, have presented a host of security challenges. With the increase in cyber crime, hacker attacks, threats from terrorists, and concerns about privacy, data confidentiality, integrity, and availability as well as strong and flexible authentication and authorization methods are critical to securing information, increasing efficiency, and reducing cost.

Professional criminals, not bored teenage hackers, are now the source of the most serious security threats. New regulations in the areas of privacy and governance are bringing the focus of IT security threats to center stage in order to better understand how best to manage and protect citizen and government information. Federal and state regulations, such as Federal Information Processing Standard (FIPS) 140-2 to ensure integrity and privacy of messages, Michigan's Social Security Number Privacy Act, Driver's Privacy Protection Act of 1994, Fair Credit Reporting Act of 1970, Gramm-Leach-Bliley Financial Services Modernization Act of 1999, the Health Insurance Portability and Accountability Act (HIPAA) of 1996, and the Sarbanes-Oxley Act of 2002, require that data is protected and remains confidential in storage and in transmission.

In order to meet these requirements and provide the necessary services to citizens, security management systems are crucial. One of the most widely adopted information security management frameworks, ISO/IEC 17799:2005 provides a strong and expanded framework for information security management. It pays specific attention to risk assessment, provides incident management guidance details, integrates other ISO standards, addresses security in business partner relationships and provides guidance on technical vulnerability management.

Specific focus on IT security today is a result of threats from the Internet. For example, in 2004 53 percent of all reported fraud complaints to the Federal Trade Commission (FTC) were Internet-related (e.g. spam, phishing, spyware, and other malware threats). In addition, nearly 5 percent of Americans have been victims of identity theft within the past five years and financial losses due to identity theft are estimated at $48 billion per year. It is reported that government systems (e.g. tax systems, driver's license applications, etc.) are the fastest growing areas where identity theft occurs. This emphasizes that the State of Michigan must do everything possible to mitigate IT risks and ensure citizens' private information is protected from exploitation, misuse, or disclosure.

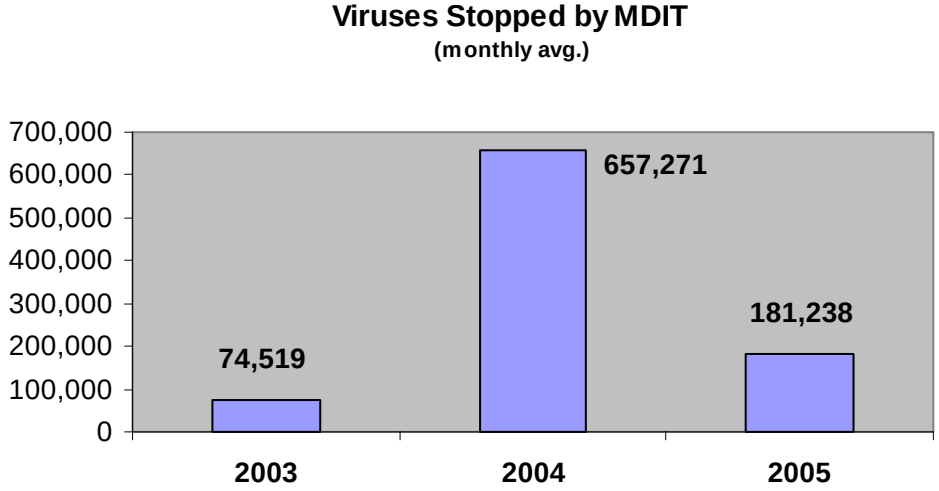
Emergency Management and Preparedness

The Department of Information Technology (MDIT) plays an active role in preparing for, training for, and responding to emergency events. If the governor declares an emergency, Michigan's State Emergency Operations Center (SEOC) will activate. MDIT's Emergency Management Coordinator (EMC) will be notified and immediately proceed to the SEOC to coordinate MDIT's response to the event. The EMC will notify MDIT's executive management and, if appropriate, activate MDIT's Emergency Coordination Center to carry out resource coordination and response efforts within MDIT. Because technology plays a vital role in the business of each agency and state government as a whole, MDIT's efforts to respond to an emergency can be significant. The emergency event does not need to be strictly cyber, as MDIT supported the Katrina and Rita relief efforts when the SEOC was activated for the hurricane disasters. MDIT has sponsored and participated in many emergency preparedness exercises that play out scenarios to test response plans' effectiveness. In addition, many key MDIT staff, from executives to responders, will be trained in 2006 in the National Incident Management System and the National Response Plan.

In February 2006 MDIT will participate in the nation-wide Cyber Storm exercise sponsored by the U.S. Department of Homeland Security. The purpose of this exercise is to raise awareness of the economic and national security impacts associated with a significant cyber incident. Participants will include fifteen or more federal agencies, including the FBI, CIA, NSA, and Secret Service; three states, including Michigan; and four other countries.

Current Security Accomplishments

The State of Michigan has experienced ongoing cyber attacks against its IT resources. Based on 2004 averaged statistics taken from gateway system logs, the state saw 21,702 daily e-mail virus attack attempts; 35,383 daily scanning attempts for unauthorized access; 4,239 daily Web defacement attempts; and six daily computer remote-control takeover attempts. The state is effectively securing IT assets and resources as demonstrated by the fact that these attempts were preempted. However, cyber criminals have become very adept at circumventing traditional defenses, and it is imperative that the state is prepared to remain one step ahead of the attackers.



Through the fiscal year 2004 State Homeland Security Grant Program (SHSGP), the State of Michigan was awarded $14.9 million for critical infrastructure protection projects. Of the state's award, the MDIT was awarded $4.1 million to reduce vulnerabilities and mitigate risks to critical cyber and telecommunication infrastructure.

Several projects were initiated to accomplish Michigan's homeland security protection goals during 2004:

- Ensuring IT systems are up and running consistently is a critical piece of continuity of government requirements. The state purchased two large fixed generators for the state's data centers to support critical State of Michigan applications in case of power failures.

- A digital video manager equipment project provides physical security at the three critical IT data centers. This facilitates better access control and surveillance of critical IT infrastructure to protect against physical attacks. This system also provides auditing and deterrence for attackers.

Several projects addressed the concerns of cyber intrusion detection:

- The event correlation solution accumulates data from various security systems such as firewalls, network-based intrusion detection systems, host-based intrusion detection systems, networking devices, and other application sources and searches for significant threat patterns within limited timeframes.

- The network intrusion detection project determines the location and nature of a cyber attack originating from internal resources against resources in consolidated data centers.

- Network traffic tools allow the capture and analysis of suspicious and potentially destructive or intrusive network traffic at strategic network locations to avoid or mitigate cyber attacks (such as denial-of-service) against critical state IT infrastructure.

- Cyber incident investigation and response technologies include a vulnerability scanning project that identifies known and unknown vulnerabilities, suggests fixes, and reports possible security holes within the state's networks. Vulnerability scanning identifies threats on the wired network and also detects rogue or unauthorized wireless access points that may have been installed.

- A project for the forensic recovery of evidence was launched in order to respond and recover from a cyber-related incident against the State of Michigan's critical infrastructure. Forensic examination is accomplished through special hardware devices and software that prevent compromising or contaminating evidence for the use of investigation or potential criminal prosecution. A second part of this project is the Rimage system that is used to distribute to

law enforcement, via DVD, information (e.g., video surveillance) and evidence of the cyber-related incident.

- Network scanning and penetration studies and assessment were accomplished that identified potential entryways into vital or sensitive data within the state's network. Potential vulnerabilities were patched and mitigated, ensuring protection of state assets.

- The Forensic Analysis of Risks in Enterprise Systems (FARES) solution built a model of possible outcomes of mitigation strategies that will be used for on-going impact analysis. FARES delivers a model of the enterprise for risk mitigation strategies.

Two important authentication and access control projects have demonstrated significant benefits in protecting government resources and providing cost savings:

- E-mail and spam and filtering software are integrated on servers at the state's gateway. This solution filters spam and serves as the state's anti-virus solution for incoming and outgoing e-mail. After Internet e-mails are filtered through the anti-virus gateway, the State of Michigan is left with approximately 4.8 million e-mails per month. About 54 percent of these are spam. The average monthly spam e-mails blocked at the Internet gateway total 2.6 million. The anti-spam implementation at the gateway shows a return on investment in number of blocked spam e-mails that would have taken time away from business-related efforts. The annual anti-spam savings total as much as $15.7 million.

- SurfControl Internet Access Control and Filtering Systems prevent system users from accessing Web sites that are deemed risks to the state's network and systems. They are used to protect against the possible disclosure of confidential information, help to ensure worker productivity by preventing access to sites that are not business related, and protect the networks from valuable bandwidth diversion and system infections (e.g., viruses, worms, Trojan programs, spyware, fraud and scam sites, etc.). SurfControl metrics show that approximately 80,000 blocked connection attempts to spyware Web sites occur every month. SurfControl's spyware block shows an annual cost savings of approximately $3.3 million.

The IT Security Awareness Web Portal (**www.michigan.gov/cybersecurity**) provides IT security information for computer users throughout Michigan. This Web site reaches out to all citizens of Michigan, state employees, and home computer users everywhere with the purpose of providing a better understanding of security issues such as computer virus threats, protection of confidential and sensitive information, Internet and e-mail usage, physical security, wireless risks, recommendations for avoiding fraud and identity theft, and best practice.

The Office of Enterprise Security (OES) is accountable to the MDIT director for identifying, managing, and mitigating IT security risks and vulnerabilities within State of Michigan government computing, communication, and technology resources. OES is also charged with the oversight of disaster recovery planning, IT security risk management, IT security awareness and training, working with state agencies to assist with their security issues, and enforcement oversight of state security policies and procedures intended to maintain appropriate levels of enterprise-wide security.

IT Security Goals

Automated Patch Management and Policy Compliance

The state requires an automated means of determining if mobile and wireless computers from outside of the state's network connecting into the state's network are compliant with State of Michigan security policies. Ensuring all remote computer systems have appropriate anti-virus protection with current virus signatures, appropriate security patches for the operating systems used in the enterprise, firewalls for mobile devices, secured accounts, and systems that are configured to approved security policy is necessary to reduce the vulnerabilities to critical infrastructure. The purpose is to ensure security policy compliance through quarantine and remediation of the mobile and wireless devices not meeting the set security policy whenever these devices connect to the network.

In addition, the automated patch management and policy compliance project must include a vulnerability management process that ensures all servers and network devices are compliant with security policy. Automated remediation of noncompliant devices that are denied access or placed in quarantine will minimize both downtime and connect time for those devices. Because manual remediation processes are ineffective in a reasonable timeframe, utilize staff resources that are short in supply, and are difficult to implement in an enterprise setting with multiple platforms, it is imperative to have an automated process that maps to a consistent set of security policies.

Measurements of number of devices remediated, DIT staff time saved from repairs, number of security patches applied, and device downtime avoided will all indicate return on investment metrics as well as protections applied.

Identity and Access Management

In the efforts to combat identity theft and adhere to privacy regulations, an identity and access management solution is necessary to secure Web-based systems, data sharing, and mobile computing technologies as these are implemented in the state. Many think of single sign-on as the flagship of identity management. However, it is much more than simple password management or reduced sign-on. Identity management is an integration architecture that provides centralized control, authentication, administration, authorization, audit, and compliance management for all events related to resource access (e.g. password management, provisioning, mobile access, and Web interface self service applications). Providing IT addresses keys

compliance concerns around documentation, enforcement, and auditing of security controls, as well as managing user accounts and profiles that link users to roles and business rules across the IT environment. The primary value of provisioning focuses on policy enforcement and audit ability around role-based access controls and centralized process management. The concept of identity is not restricted to people. Devices, applications, and physical assets comprise additional identities that need to be managed in an increasingly networked and interconnected environment.

Currently, there is not a standardized implementation of identity and access management in the State of Michigan. An access control model for employee, authorized agent, and public identity and security management must be developed. A determination of data sources, services and applications, devices, and service directories must be assessed. Meta-directories are software products that synchronize and aggregate identity data stored in multiple repositories. This can provide an effective way to reduce user administration by synchronizing the identity data across the data identity stores.

The identity and access management solution must be able to identify and authenticate each requestor (user, device, application, etc.), authorize each request for the specific resource based on the requestor's identity, analyze sessions to ensure actions are not malicious, and audit the activity on per requestor and per resource bases for compliance and audit. It is recommended to prioritize projects based on demand and complexity and then roll out the processes incrementally to systems that would benefit most from the identity management processes.

Measurements of identity and access management benefits can be derived from reductions in user administration, speed and agility of customer resource access, identity store synchronization, audit and accountability of actions, and privacy protections provided to confidential data.

OTAR Encryption

About 2,200 Michigan Public Safety Communications System (MPSCS) law enforcement and emergency responder users have encrypted voice communication and the need will continue to grow. The process to change keys is logistically very difficult as every radio has to be physically handled. Therefore there is a need to implement an automated, over-the-air-re-keying (OTAR) system.

An OTAR encryption key management system provides automated capabilities to manage the encryption keys to protect voice and data transmission from unauthorized listening. OTAR gives a system operator the capability of regularly, remotely and securely changing keys over the air.

Measurements for OTAR benefits can be calculated through the savings made by replacing manual processes. As an example, the radio technician costs for changing the keys on all 2,200 radios today would equal about $16,000 (one Network Control Center technician could re-key 40 radios in a day. One technician would use 55 days to re-key the 2,200 radios. Salary and wages for a day equals about $290.) This cost does not include the time users lose dropping off and picking up the radios,

opportunities lost when the radios are in the shop, or the cost of delaying other tasks as the NCC assigns resources to perform the re-keying. Approximately two hours per radio would be lost at an additional cost of about $160,000 (4,400 hours @ $36/hr).

Both the costs and logistical problems of regular re-keying drive the need for MPSCS to implement an automated version of this process.

Summary

In conclusion, the current level of cyber and communication protection in the State of Michigan has significantly improved as a result of Michigan's homeland security initiatives. However, gaps remain that require additional attention to ensure the state is prepared for cyber attacks against critical IT infrastructure. The key driver for the automated patch management and policy compliance project, identity and access management, and OTAR encryption key management is regulatory compliance. However, the three targeted goals will also facilitate cost containment and more effective business operations. Through the implementation of the targeted IT security goals, the level of cyber protection in the State of Michigan will improve appreciably.

Appendix G - Finance & Human Services

Finance and Human Services

Table of Contents

Executive Overview

Answering Governor Granholm's call to "think like a business," we are working to optimize our financial, audit, human resources and procurement processes. Doing so will mean our employees spend less time on process and more time developing innovative solutions to the state's, and our citizens', evolving needs. Better processes also mean that up-to-date information is available to decision makers in real time, leading to increased productivity and value to taxpayers.

All of this innovation and change calls for an IT work force prepared with the knowledge and skills needed to enable a more business-like approach to delivering state services. The Michigan Department of Information Technology's (MDIT) Office of Employee and Financial Services (OE&FS) already plays a key role in making the department a great workplace and the employer of choice for technology professionals.

We have worked to instill the values of excellence, integrity, teamwork and inclusion through the implementation of the MI 360 program, allowing employees to provide feedback for development of managers.

Employee development and training is another high priority, with the vital goal of providing behavioral and technical training opportunities for career advancement. We have actively pursued individual development plans for all department employees, working with leaders across the department to provide professional development opportunities. To accomplish our goal of making Michigan a great workplace and the employer of choice for technology professionals, we will also seek to integrate with our individual development plans our succession planning for managers and key personnel on mission critical applications in 2007.

Overview and History

The Office of Employee and Financial Services (OE&FS) serves as the Michigan Department of Information Technology's (MDIT) administrative arm, providing oversight of the department's budget and finance operations; department-wide communications and media relations; human resources; policy development; facility management; the department's organizational and professional development programs; and all other administrative functions of the agency. OE&FS has overseen the effort in rate development for state government technology services, having implemented the monthly invoice process for service rates that are charged back to the other state agencies. With responsibility for a $360 million technology budget and overall spending of $450 million, OE&FS has helped reduce technology spending by nearly $100 million since fiscal year 2002.

This office plays a key role in making the department a great workplace and the employer of choice for technology professionals. OE&FS has actively pursued the creation of Individual Development Plans for all department employees, working with leaders across the department to provide professional development opportunities for all employees. In addition, OE&FS has worked to instill the values of excellence, integrity, teamwork, and inclusion through the implementation of the MI 360 program, allowing supervisors, peers and employees to provide feedback for development of MDIT managers.

Internal communications with employees is a high priority for OE&FS, making sure department members receive important communications to help them do their job and make work more fun. TechTalk, the department's intranet site, provides a broad range of information, including many of the team building opportunities that make the department a great place to work. Employee development and training is another high priority for OE&FS, with the vital goal of providing behavioral and technical training opportunities for career advancement and improved service to our clients.

OE&FS is responsible for some of the key objectives in this strategic plan for making the department a great workplace. Some of those objectives include: improving employee satisfaction; establishing relationships with universities to attract new talent; providing leadership development opportunities; seeking to implement a professional development reimbursement program; implementing the MI 360 program for management development; performance management and individual development plans; succession planning for replacement of lost leaders; working with Department of Civil Service (CS) to improve compensation; coordinating team building events to enrich the department's culture; and creating standard position descriptions for each job classification.

OE&FS has a total of 39 employees providing all of the administrative functions of the department. These employees belong to various sections, including Employee Services, Communications, and Financial Services. Employee Services is comprised of sections responsible for human resources, professional development, facility management, and administrative policies. Communications is responsible for

internal communications with employees, media relations, values integration, requests through the Freedom of Information Act, and content management for the intranet, department home page, and client and customer Web site. Financial Services is divided into various units including Billing Services, Rate Development and Infrastructure Services, and Financial Analysis Budget and Program Support.

Office of Employee and Financial Services – The Story

Administrative functions within an IT organization may be one of the most overlooked, yet most critical, aspects of organizational success. Human resources, budget and finance, internal and external communications, professional development – these are all critical functions for success and therefore must be included and planned for in a strategic sense. OE&FS has a clear vision for the future that can be categorized into three major areas:

- Simplifying costs through rated services for our client agencies
- Effectively managing the department's human resource environment to allow each employee to reach their potential
- Melding the 19 various inherited department cultures into our own unique culture of excellence, integrity, teamwork, and inclusion

Let us examine each of the areas in more detail.

Simplifying Costs through Rated Services

Whether it is the Department of Natural Resources or the Department of Community Health or any of the other 17 departments we serve, our clients want an easy and simple way to pay for the IT services they receive - and they want to understand what they are paying for. That is exactly why our vision is to develop rates and simplify billing for all of the department's services. The vision for rate development and simplification includes three main facets:

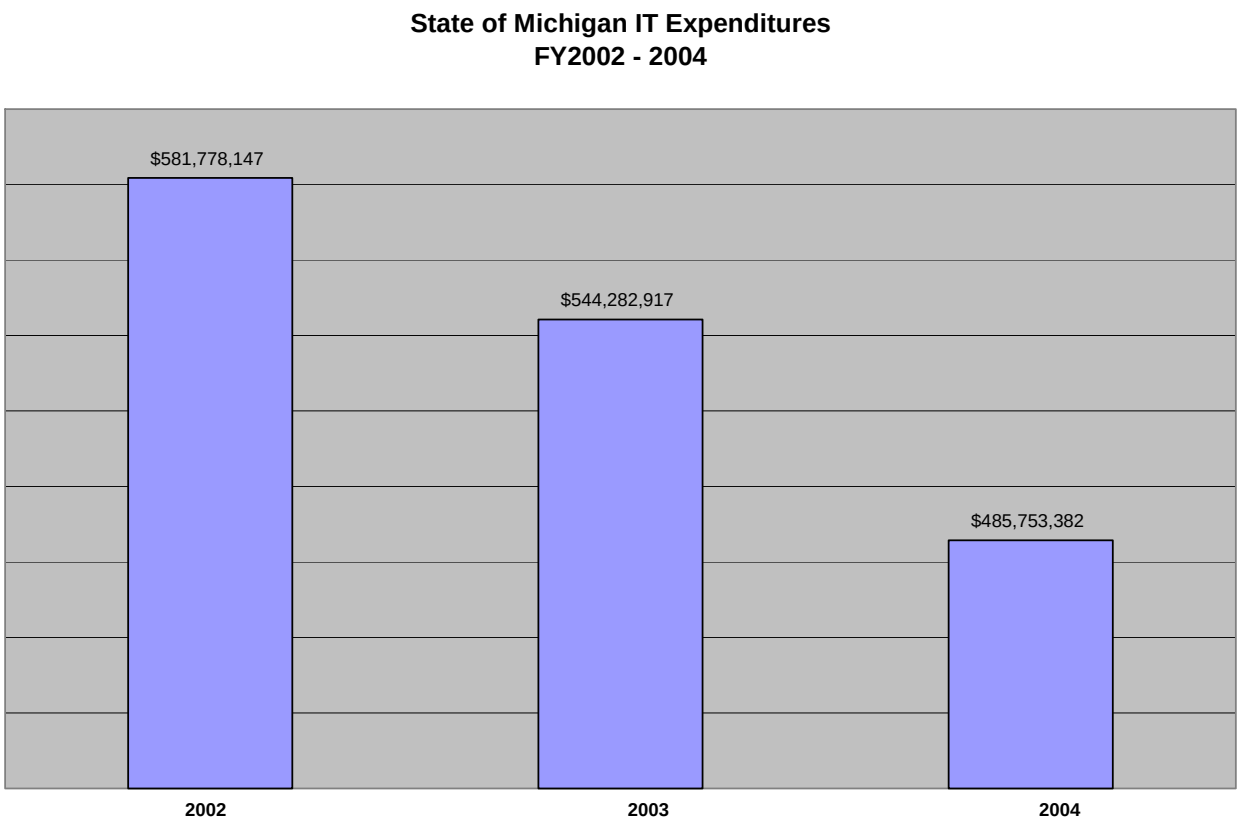
1. Rate all services by FY 2008;
2. Simplify rate development to make it more understandable and user friendly; and
3. Rate Technical Services by group functionality (e.g. an office platform rate)

With a constant focus on improving customer service, the financial staff provides detailed explanations of all IT costs to our client agencies, including historical detail back to FY 2003. They will continue to streamline reporting across all agencies so that the client has a clearer and more simplified view of costs which includes the total cost of ownership – a concept new to most of the client agencies. The financial staff will continue to work to identify areas that can be improved and streamlined for continued cost savings. In the end, clients receive additional assurance through the audit process that MDIT is providing excellent stewardship of their agency funds.

Another key area in simplifying costs for the client agencies is dependent upon revising the appropriation model used by the department. Actions in this area include:

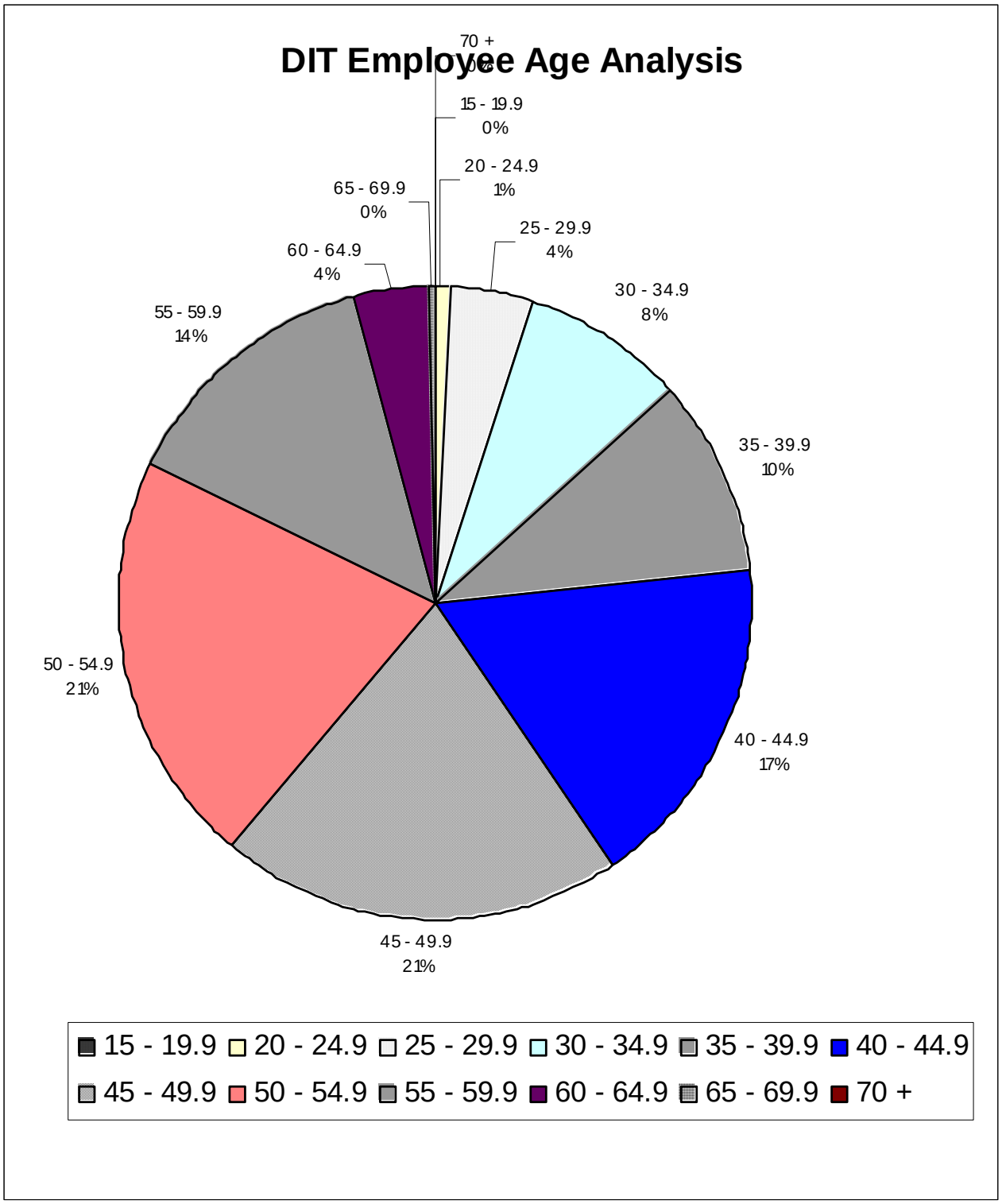
- Transferring the Michigan Public Safety Communications System (MPSCS) appropriation from the Michigan State Police to our department
- Adding revenue carry forward language to the MPSCS boilerplate legislation
- Reviewing our cost allocation methodology
- Improving our reporting to the Office of the State Budget and the legislature
- Reducing multiple line revenue sources to a single line to eliminate excessive processes
- Implementing an asset management system

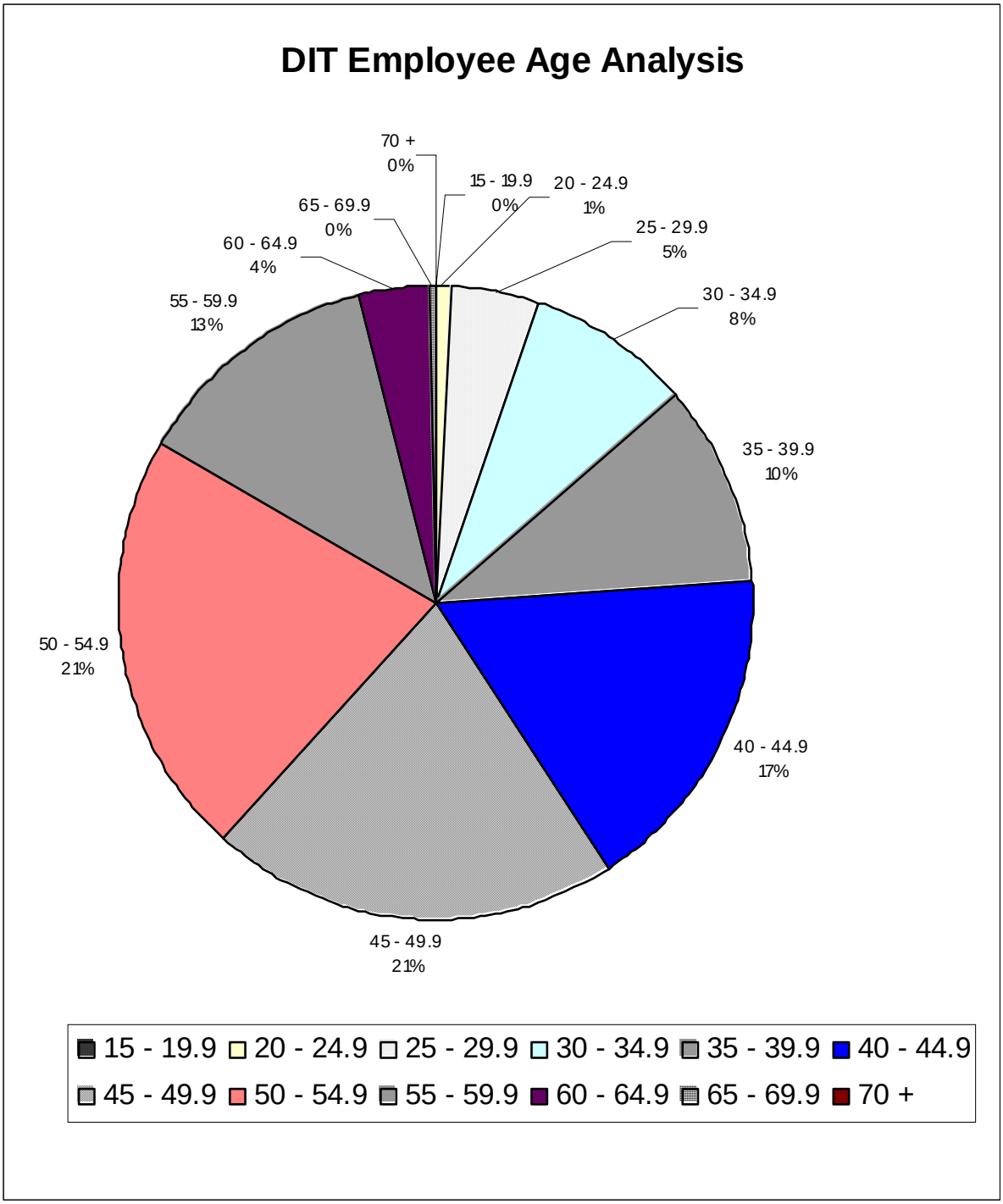
The asset management system is a key piece to the equation. Prior to the formation of the department, the State of Michigan had no accurate inventory of its computer assets. There were 55,000 desktops and more than 3,000 servers, but no accurate record of what they were, where they were located, or what was on them. With the new asset management system, we become better stewards of our assets. We know what we have and where it is located. With an accurate inventory of our assets, we give the clients confidence and better data to make informed decisions.

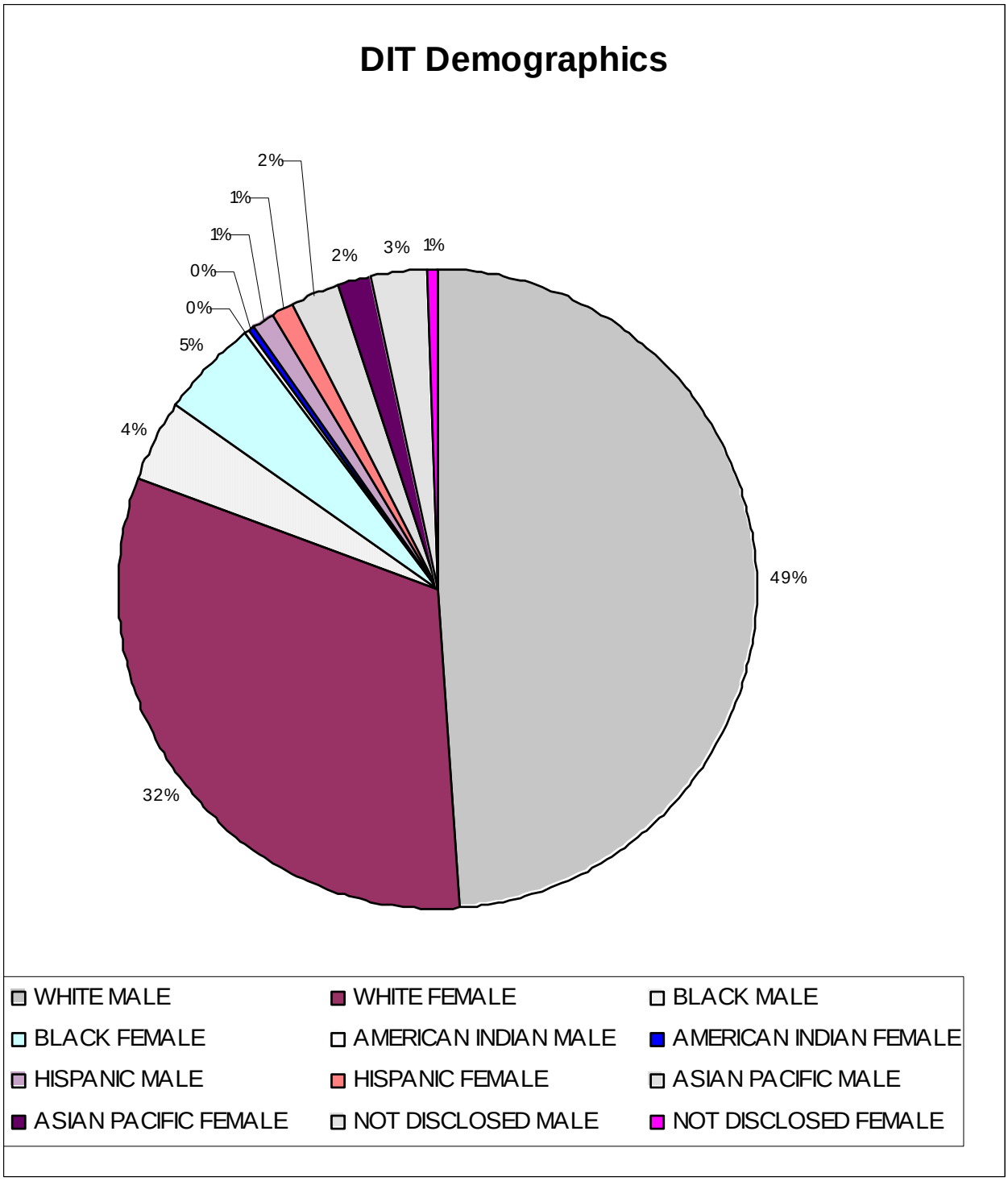


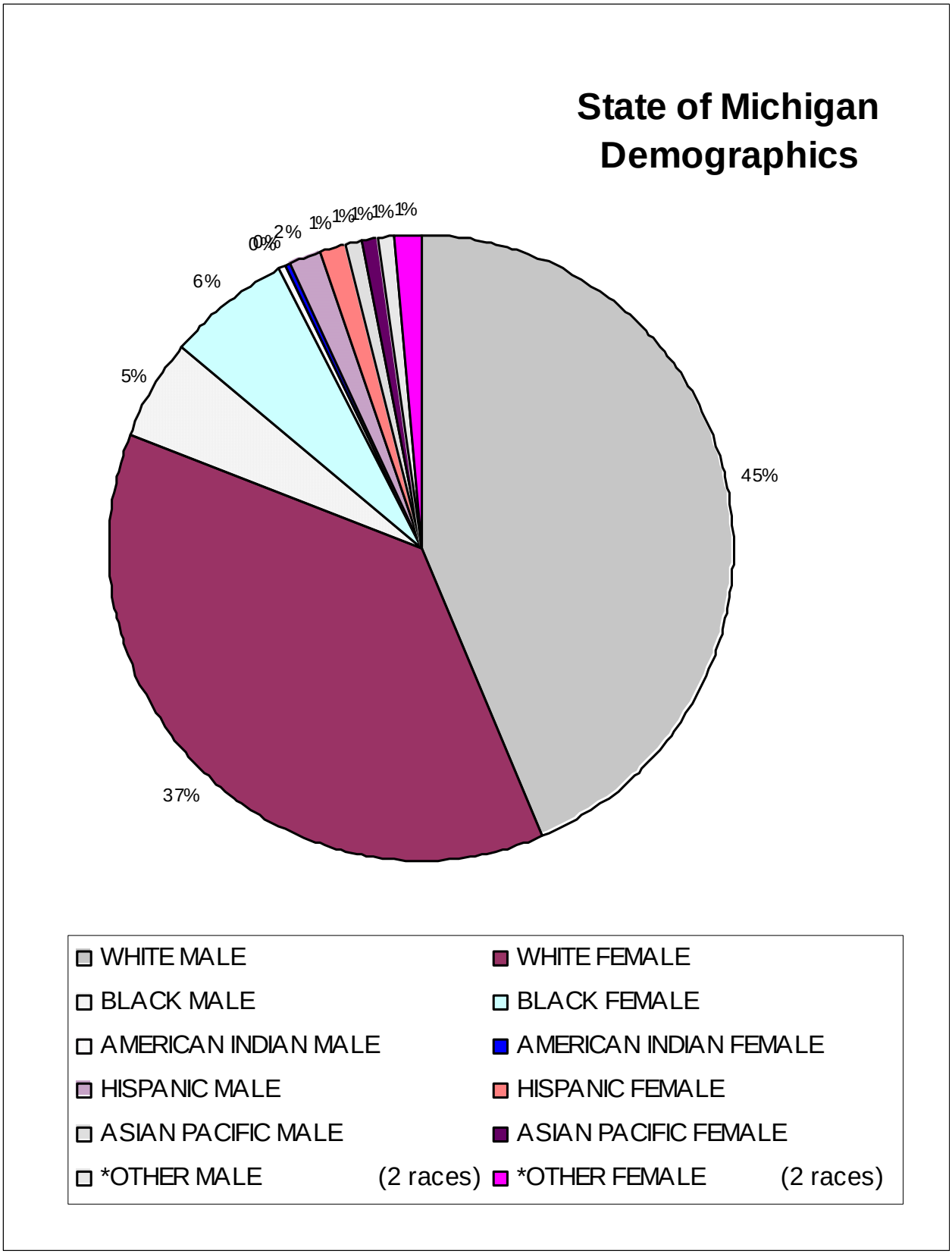
Effectively Managing Human Resources and Associated Processes

Employees make an organization thrive, and it is no different in a state government IT organization. Our employees allow us to find innovative and fresh solutions to the state's challenges. Investing in these employees and effectively managing the human resource processes are vital to organizational success. In order to develop, attract, and challenge the best talent looking forward, it is helpful to examine the current key demographics of our employees, as shown on the following pages.


DIT Employee Age Analysis
70 +
0%
15 - 19.9
0%
20 - 24.9
1%
25 - 29.9
4%
30 - 34.9
8%
35 - 39.9
10%
40 - 44.9
17%
45 - 49.9
21%
50 - 54.9
21%
55 - 59.9
14%
60 - 64.9
4%
65 - 69.9
0%
15 - 19.9
20 - 24.9
25 - 29.9
30 - 34.9
35 - 39.9
40 - 44.9
45 - 49.9
50 - 54.9
55 - 59.9
60 - 64.9
65 - 69.9
70 +


DIT Employee Age Analysis
70 +
0%
15 - 19.9
0%
20 - 24.9
1%
25 - 29.9
5%
30 - 34.9
8%
35 - 39.9
10%
40 - 44.9
17%
45 - 49.9
21%
50 - 54.9
21%
55 - 59.9
13%
60 - 64.9
4%
65 - 69.9
0%
15 - 19.9
20 - 24.9
25 - 29.9
30 - 34.9
35 - 39.9
40 - 44.9
45 - 49.9
50 - 54.9
55 - 59.9
60 - 64.9
65 - 69.9
70 +


DIT Demographics
2%
1%
1%
0%
0%
5%
4%
32%
2%
3%
1%
49%
WHITE MALE
WHITE FEMALE
BLACK MALE
BLACK FEMALE
AMERICAN INDIAN MALE
AMERICAN INDIAN FEMALE
HISPANIC MALE
HISPANIC FEMALE
ASIAN PACIFIC MALE
ASIAN PACIFIC FEMALE
NOT DISCLOSED MALE
NOT DISCLOSED FEMALE


State of Michigan Demographics
45%
37%
5%
6%
2%
1%
1%
1%
1%
1%
1%
WHITE MALE
WHITE FEMALE
BLACK MALE
BLACK FEMALE
AMERICAN INDIAN MALE
AMERICAN INDIAN FEMALE
HISPANIC MALE
HISPANIC FEMALE
ASIAN PACIFIC MALE
ASIAN PACIFIC FEMALE
*OTHER MALE (2 races)
*OTHER FEMALE (2 races)

Looking at the current demographics for the department tells us a great deal. First, we see that about 40 percent of our employees are women (32 percent of them are white; almost 5 percent African American; and another 3 percent are of other ethnic minorities). Some 48 percent of our employees are white men; 4 percent are African American; and another 4 percent are of other ethnic minorities. Of the nearly 1,700 people employed by the department, 261 serve in a role as supervisor or manager, translating to a manager to employee-ratio of 1 to 5.4. This demographic data is helpful looking forward, especially as we refine and further plan for professional development and training for employees.

Almost 60 percent of our employees are 45 or older, presenting us with the challenge of replacing their knowledge base as they reach retirement age. Should another early retirement package be offered to state employees, the data shows us that the department could lose nearly 30 percent of the workforce. So, the demographic data is also extremely helpful to the department in succession planning. The department has analyzed the demographics of all employees, by classification as well as functional area, using the demographics in our first formal succession planning process to identify critical risk areas pertaining to the age of the workforce and retirement projections, continuity of operations for critical systems and diversity issues. Some of the department efforts to increase the diversity of our workforce include ensuring that all interview panels are diverse themselves, both by function as well as by race and gender. In addition, diversity planning teams are examining ways to secure a more diverse workforce, including new recruitment efforts at college job fairs across the state.

Another area key to effectively managing human resources involves monitoring and planning for contract staff. Staff augmentation with contract employees requires a delicate balance between the work done by state employees and that best performed by contractors. The department continually examines that balance, recently implementing a contractor replacement initiative to eliminate some of the higher-priced contract employees no longer needed as a result of consolidations. The department was the first State of Michigan agency to take the initiative to replace contractors with full-time employees. As a result of the success, the Office of State Employer, on behalf of the Governor's Office, tasked all agencies to follow in our footsteps by implementing a formal program designed to eliminate contractors across all state agencies. The department worked to obtain the necessary approvals to increase our allowable headcount to hire 140 staff, thereby eliminating the same number of contractors and resulting in an annual repeatable savings of $19,956,743. Examination of the delicate balance of contract staff in relation to state employees is an ongoing process, and future savings are anticipated as the department works to identify further contractor replacement opportunities. State workers must have the needed knowledge so that we are not dependent on contractors. Determining the knowledge we need and helping employees gain that knowledge through an individual development plan are a critical part of the human resource mission.

The issue of employee classifications and compensation is another key area when it comes to the effective management of human resources. MDIT has partnered with CS and the Office of the State Employer (OSE) to remove most of our IT staff from a broad-banded pay structure. This key step returned guaranteed compensation

increases for staff that had been banned from pay increases for numerous years under the broad-banded pay structure. When IT was decentralized in the various 19 agencies, there was inconsistency in how employees were classified, and, therefore, in how they were compensated - even when the work performed by these employees may have been nearly identical. When employees were decentralized in the various agencies, there was no systematic review of classifications of staff across agencies. IT specialists were established based on the "specialist" concept in each agency. Now that all IT staff are centralized within MDIT, some of these specialist classifications are no longer supported by CS. Working jointly with CS, the department recently completed a classification review that ensured help desk and desktop support services staff had consistency in classifications and compensation. A special project was recently initiated to allow us to analyze how other public and private sector organizations deliver IT services to their clients as well as the associated classification and compensation systems in support of the delivery of IT services. In planning for the future, we will be working with CS to identify, define, and implement a classification that enables MDIT to attract, retain, and competitively compensate staff with highly specialized technical skills, knowledge and abilities.

Department employees have access to numerous online training programs that are both technical and behavioral in nature. In addition, more structured training opportunities are provided through the formal process of Individual Development Plans (IDPs). An IDP is created for each employee, with the guidance of the employee's manager, to identify both behavioral and technical training needed for the employee to effectively perform their job. User groups have been created to help employees learn technical skills and share information with one another on specific applications and technical issues.

The department utilizes a professional development strategy to support employees throughout their career. Bringing together 19 separate agencies - all with employees at various levels of technical training - created a major problem and training disparity. The department is using an integrated professional development strategy to eliminate this disparity. The professional development strategy is centered on competencies, job roles and development opportunities (training). By identifying critical job roles and required competencies for all critical job roles, IDPs can be developed that link employees to appropriate development opportunities.

Employees were asked to follow these seven steps to identify their critical job role and their IDP:

1. Review your position description with your manager. Jointly discuss your position and be sure you understand the types of skills and competencies that are needed for your position both now and as the position evolves.
2. Identify your critical job role. If your position is a mix of more than one job role, use the predominant job role for identifying behavioral competencies. Review the mix of roles to identify the technical competencies.
3. Identify your personal strengths and weaknesses in the required competencies listed for your job role. Select competencies to focus on for the upcoming rating period.
4. With your manager, discuss and jointly identify and prioritize development opportunities for the competencies selected.

5. Add development opportunities (e-learning, courses, seminars, conferences, etc.) to your IDP and register for each individual development opportunity.
6. In some cases development opportunities may be denied because they are not reasonably connected to job role, conflict with priorities or funds are not available. In these cases, they may still be slotted for future consideration.
7. Follow up and make adjustments to your IDP throughout the year as needed.

One of the final ingredients to effective planning in the Employee Services area relates more practically to our facilities. The department's master facilities plan provides the guidance and direction for effectively housing our employees. One of our key facilities is the Operations Center, a large two-story building that houses many of the critical department functions. From a budget standpoint, future consolidation of the Operations Center is planned, including the coordination of information to provide a detailed capital outlay request for fiscal year 2007.

Building our Culture of Excellence, Integrity, Teamwork and Inclusion

Melding the IT employees from 19 different agencies into one has many challenges, but perhaps the greatest is finding our own culture! Over 1,700 employees came from 19 long-standing organizations with well-developed cultures and traditions. It is our responsibility to develop our own new and unique culture, giving employees a new sense of identity and pride. One of the ways to do this is to provide a focus on core values. The Organization Development Officer (ODO) Network is a group of leaders from each department that maintains an organizational focus to change the culture and make each agency a great place to do great work. We play an active role in this network. At the core of this work is instilling the values of excellence, integrity, teamwork and inclusion into the workplace. Employee values surveys are administered to determine the level of satisfaction and evidence of the four values at work. Results of the survey are then used to develop action plans.

Some of the key actions to help instill the values and to help develop a departmental culture include:

- Helping mid-level managers by improving communication between the levels of management through the formation of an "Operations Team" consisting of all middle managers. This team meets monthly, and members from the highest levels of executive leadership attend the meetings to share information and strategic direction to more clearly define responsibility, build trust and honesty, and further instill the values within our management structure.
- Since "immediate family" was one of the key concerns of department employees in a recent employee value survey, a department telecommuting policy is being developed that will allow some employees to perform job responsibilities at home, rather than in traditional office settings, under a managed agreement with their supervisor.
- Town Hall meetings are held every spring and fall, allowing an open forum for all employees to ask questions of the director and the executive leadership.
- Department blood drives are coordinated to foster teamwork and inclusion.

- Holiday online auctions for charity are conducted, allowing employees to donate and bid on various items, helping instill the teamwork value.
- "Day in the Life" features are written and produced on the intranet each month, profiling a typical day of a selected MDIT employee, helping create the feeling of family and further identify our culture.
- An annual department-wide summer golf outing is coordinated, again to help further our culture and teamwork.
- Recognition awards are completed routinely. Members from the department can nominate their peers for outstanding contributions to the agency. The director signs each award, which is presented to the nominee in front of other employees in public meetings. Personal thank you notes from the director is another method utilized to show appreciation to the staff.
- Discussion forums are provided on the department intranet to allow employees the ability to correspond about issues of importance they may have in the completion of their job duties.
- Weekly informational e-mails are sent to every employee to inform them of various items of interest from executive leadership.
- A 360 degree review process was instilled so that employees have a mechanism to provide feedback to managers and so that managers can receive feedback from employees, peers, and supervisors to help them improve their management skills.
- An annual outing is organized at Lansing's minor league baseball park. All employees are invited and encouraged to attend the baseball game with supervisory approval. The event helps to further establish our culture and a sense of belonging for our employees.

Looking forward, the department will continue to monitor employee feedback from the values surveys to gauge the pulse of the organization and to identify more events that will foster the core values of our agency. One key new initiative will be to develop a department-wide recognition event, allowing for employee recognition that includes family members. As time passes, the culture of this new department continues to evolve, but it requires support, commitment, and planning.

Appendix H - IT Procurement Strategies

IT Procurement Strategies

Table of Contents

Executive Overview

Businesses use strategic planning to remain competitive and improve the bottom line. The Michigan Department of Information Technology (MDIT) has seized one of consolidation's bottom-line improving opportunities by strategically redesigning the state's IT procurement processes. The new procurement model was developed to guide MDIT, client agencies and vendors in providing cost-effective, efficient and secure technology solutions needed for Michigan and its citizens. A two-pronged, strategic approach – consolidation of all IT purchasing and the redesign of procurement processes – are at the center of the model. The MDIT procurement model's mission is:

> *"To procure IT commodities and services through a fair, open and competitive process while delivering technology solutions to meet the business requirements of the state, its agencies and its citizens."*

In order to live the mission, MDIT redesigned the procurement process to meet the following goals:

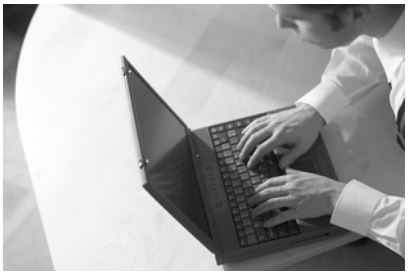
1. Alignment with the governor's goals and mandates
2. Competitively bid - open to more vendors
3. Bundle for total cost of ownership (TCO)
4. Multi-year bids for contracts as appropriate
5. Fixed price rather than time and materials
6. Bundle solicitations
7. Leverage contract management expertise core competencies

The first strategy to meet our goals was to centralize all state IT procurement into the Office of Contracts within MDIT's Bureau of Strategic Policy. This enables MDIT to strategically leverage the state's purchasing power to meet the needs of our agencies and citizenry. It has also allowed the adoption of methods of developing and managing IT standards so that MDIT is able to better manage technology resources and human capital to provide better service levels that are efficient and cost effective.

MDIT's second strategy was to collaborate with the Department of Management and Budget (DMB) to develop the processes needed to meet the procurement goals. Within the processes a set of procurement tools were developed to streamline IT purchasing. The procurement toolbox includes: Contract vehicle portfolio, asset management, and the Horizon Program and its offshoot the Spotlight Program.

Bureau of Strategic Policy Office of Contracts

Mission



To procure IT commodities and services through a fair, open and competitive process while delivering technology solutions to meet the business requirements of the state and its agencies.

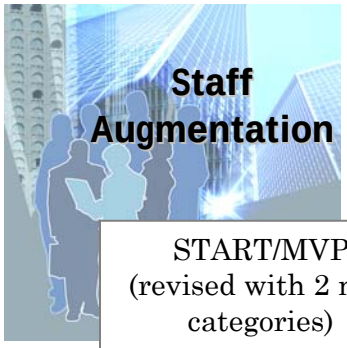
Introduction

This contracting portfolio allows both the Department of Management and Budget (DMB) and the Department of Information Technology (MDIT)to meet our requirements of delivering quality contracts and products in a manner that includes:

- ✓ Quicker turn-around
- ✓ Less labor intensive
- ✓ Better use of staff time
- ✓ Increased service levels
- ✓ Cost savings

Contract Vehicle Portfolio

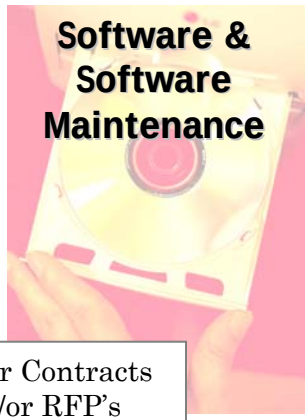
Master Contracts/Catalogs



START/MVP (revised with 2 new categories)

Exceptions to Executive Directive

Business Needs



Master Contracts and/or RFP's

MVP and RFP

Master Contracts and/or RFP's

ITAM (Information Technology Asset Management)

Through use of MDIT's new IT Asset Management tool (ITAM), MDIT and its client agencies will be able to purchase hardware and software commodities and maintenance services utilizing specific catalogs. It also provides MDIT the ability to track and manage all IT assets throughout their lifecycle (acquisition to installation/implementation to maintenance to salvage). ITAM consists of several key components:

- Procurement improvements in purchasing commodities and services throughout the product's lifecycle
- Software license management
- Asset tracking, monitoring, configuration management and control
- Financial reporting
- Process integration with service delivery (helpdesk and field services)
- Perpetually maintain accurate asset records (discovery tools, physical inventories)
- Automated approval processes

Horizon Program

The Horizon Program was developed to bring technology suppliers and MDIT decision-makers together to evaluate products and their potential uses in the State of Michigan. This forum gives suppliers an opportunity to demonstrate the value of their products as they relate to particular state areas of interest. MDIT decision-makers use the knowledge gained and possibilities explored in developing their plans for the future of information technology in the State of Michigan.

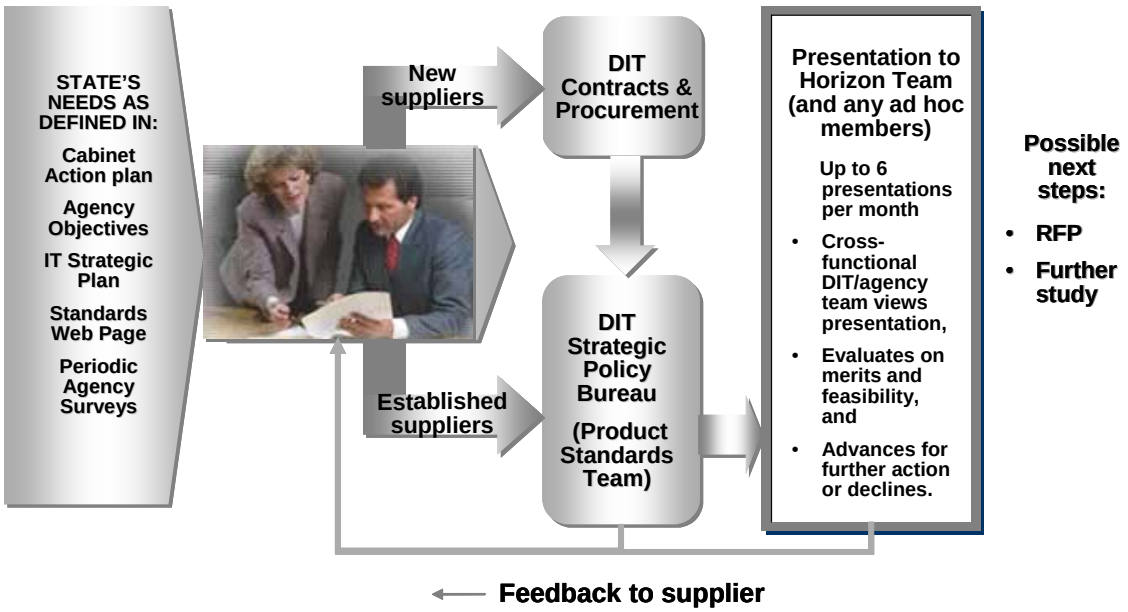
Program details are available at http://www.michigan.gov/dit/0,1607,7-139--107283--,00.html . A detailed description of the Horizon Program follows in this appendix.

Why the Horizon Program?

Traditional methods of marketing to the state left room for improvement. The following points were noted and addressed in developing the Horizon Program:

- Few managed points of contact
- Suppliers marketed separately to state agencies and various MDIT decision-makers
- Individual meetings are an inefficient use of time
- No established means to share information among key decision-makers across agencies
- No means to provide suppliers with state's areas of interest for future technologies
- Missed opportunities to learn new technologies

Horizon Program Overview



The above figure depicts the operation of the Horizon Program. Of particular interest to Michigan's IT strategic planning efforts is the fact that the Horizon Program begins with the state's needs as defined by the Cabinet Action Plan, IT Strategic Plan, client agency surveys, and leadership input. This information is available to Michigan's suppliers, who become Michigan's partners in helping set the course for achieving what is needed in the best possible way with information technology.

Supplier requests to present to MDIT leadership are reviewed for their relevance to current and planned needs. All requestors receive a response, either positive or negative. Requestors who are selected to present work with MDIT staff are asked to tailor their presentations to provide the most value to the decision-makers that attend each supplier presentation session. All potential suppliers retain the ability to pursue State of Michigan business by other established processes.

Horizon Program Process

- Supplier completes the request form and submits it to MDIT
- Supplier request is researched by facilitator
- Review team determines if request meets state's needs and requirements
- Facilitator processes request based on the review team results
  - Notify supplier not of interest at this time
  - Notify supplier that a presentation will be scheduled
  - Notify supplier that the request has been referred to a functional area
  - Notify supplier that staff augmentation is not being considered at this time
- Facilitator will schedule each presentation with supplier
- Facilitator will notify the executive and leadership team and provide an agenda from each supplier

- Facilitator will accept requests from MDIT attendees for follow-up with the supplier
- All correspondence with each supplier will be archived

Horizon Program Benefits

The Horizon Program benefits both the state and potential vendors. The table below includes a list of benefits for all involved.

Table 1 - Horizon Program Benefits

Suppliers	State
• Know state's topics of interest in advance • Know the right people will be at the table • Improve access to a larger audience • Will receive a reasoned result from each request • Partner with state for new technology solution • Reduce risk • More efficient use of time	• Solutions directed to topics of interest and need • Solution verified against standards and strategic direction • Opportunity to leverage solutions • Partner with suppliers for new technology updates and solutions • More efficient use of time

Spotlight Program

MDIT has launched Spotlight, an offshoot of the Horizon Program. Horizon's purpose is educating MDIT executive and leadership staff on new technologies and products. The Spotlight Program gives suppliers and manufacturers a chance to show a targeted audience what is "under the hood" of their product. Meetings may include demonstrations, scrutiny and analysis by an audience with specific interest in the subject matter. This is for state of Michigan employees who do not want to review glossy handouts, executive overviews and press releases. MDIT is pleased with the program because it brings the suppliers together with the subject matter experts. The suppliers are pleased because they have an educated audience.

Appendix I - Statewide Communication

Statewide Communication

Table of Contents

Executive Overview

For citizens, business and government, the ability to communicate and share information is essential for making decisions. It is imperative that secure and reliable data is readily available - whether it's for a businesswoman to understand the details of a product before investing or for a police officer responding to an emergency.

Different media have been developed to enable communication and data sharing, including cellular phones, cable, radio and the Internet. Because these technologies often overlap, the challenge is not deciding which one to use, but rather which combinations to get the right information to decision makers.

Demands to meet homeland security needs and citizens' expectations call for instantaneous and constant communication. This comes with a high price. Keeping cost down requires streamlined services and interoperable communications. The Michigan Public Safety Communications system (MPSCS) currently provides interoperable communications to state and several local government first responders. With just under 200 towers supporting approximately 29,500 radios, this is the largest system of its kind in the U.S.

Michigan must continue to do more with less. The communications infrastructure must be a "utility" that serves as a building block for new and changing services across all state agencies. Effective central oversight and management of the state's entire communications infrastructure provides consistent and standard services, savings in support costs and technical training, and purchasing volume to contract negotiations.

The state's chief information officer (CIO) has established a task force to develop a consolidation strategy for Michigan's communication systems. This group will:

- Define required characteristics of various types of communications tools (how fast, reliable, secure, widespread, etc.)
- Assess capabilities of existing and emerging technologies to, for example, ensure that the state's first responders have interoperable communications in an emergency, including the role of MPSCS in this important public safety component
- Align the communications technologies to state needs

This consolidated approach will build new and greater capabilities to share infrastructure, applications and contract opportunities with local governments. It will also fulfill citizens' expectations of a government that is "always on."

Communications in Michigan

For citizens, businesses and government in the information age, the ability to communicate and share information with each another is the foundation that enables decision-making and business deals. From a businesswoman discovering the details of a potential investment to a police officer responding to a disturbance, having secure and reliable information is imperative to getting the job done.

As a result, growth has increased in the development of different media used to communicate timely information to decision-makers. Telephone, cell phone, cable, radio and Internet are all used to provide services that overlap with each other. The question that remains should not be which one technology is best to use, but how can we ensure that we have the right infrastructure in place so that we can use the tools necessary to provide decision-makers with the right information at the right time.

In today's economy, the delivery of government services requires instantaneous and consistent communication of information, internally and externally, to meet constituent expectations. While they enhance efficiencies and provide long-term value, the technologies that support this communication require an investment of government's already-shrinking budget.

With the immediacy of today's homeland security issues, first responders must have the ability to communicate seamlessly. Homeland security responses require multiple agencies to respond simultaneously, working together to coordinate their efforts. As a result, the need for interoperability and secure communication is evident now more than ever.

Michigan's Sense of Urgency

The needs to reduce costs, streamline services, and provide interoperable communications have been recognized as priorities for the State of Michigan. The state's communications infrastructure must be a utility that serves as a building block for new and changing services across all state agencies. Increasingly mobile workers will rely on the availability and consistency of the communications infrastructure in every agency and at every work location across the state. Their sense of safety and security is challenged by the unknown – will their phone work if they face a hostile situation? If a customer needs to leave an urgent message for assistance, will the voicemail system work? Central oversight of the state's entire communications infrastructure is necessary to supply the consistent and standard systems needed for the provision of services, savings in support costs and technical training, and purchasing volume for contract negotiations.

Governor Granholm declared in her 2005 State of the State Address that the State of Michigan must provide interoperable communications to Michigan's first responders by 2008. However, this is not just a concern for Michigan – it is a national concern. The U.S. Department of Homeland Security has proclaimed enhancing interoperable communications as one of its seven national strategies.

While corporate best practices point toward the central management of wireless, voice, video, and data by the IT department, Michigan presently uses a hybrid, "cautious adopter" approach. Michigan still uses a mixed distributed/federated management model for wireless, voice, and video services, but has centralized data services management within the Department of Information Technology (MDIT). Additionally, most other states employ a distributed/federated model of wireless, voice, video and data services management, negotiating consolidated contracts and managing their use at the agency level. Michigan can continue its IT leadership by centralizing all communications services management within a single agency.

The Vision of Michigan Telecommunications

Telecommunications includes powerful tools that enable people and businesses to accomplish their goals. The State of Michigan's telecommunications plans for the next five years include:

- Consolidating all wireless, voice, video, and data services contracts under MDIT administration
- Setting standards for technologies and interoperability
- Making MDIT contracts "mandatory use"
- Including agencies' service delivery staff in requirements gathering and planning

More specifically, MDIT's plans include:

Voice Communications

1. In 2006, we will consolidate all telecommunication contracts under MDIT and centralize oversight of contract products, services, use, and spend. Agency-focused requirements will be gathered. Technology and product standards will be established, including standard contact center technology services and brand-office voice technology services. High-risk sites will see aged equipment replaced with new standard products. We will also pilot Internet Protocol (IP) telephony sites within 2006.

2. In 2007, planned replacement and upgrades of equipment at high cost and high risk locations will continue. Local voice services will be centralized within MDIT Telecommunications. Centralized voice, video and mobility applications (including voice mail) will be developed. Greenfield sites will be brought on with IP Telephony.

3. Planned equipment replacements and upgrades will continue in 2008. All upgrade sites will be IP Telephony. MDIT Telecommunications will prepare for the next technology and services change by refreshing state standards throughout 2008.

4. In 2009, we will merge central and branch-office systems, as well as complete planned replacement and upgrades at any remaining locations. New contracts for "2nd decade" technology and services will be developed.

Wireless (Cellular Technologies)

1. In 2006, we will consolidate all wireless (cellular provider) service contracts and provide centralized oversight of contract products, services, usage and spending within MDIT Telecommunications.

2. In 2007, we will work to increase the usage of wireless voice and data technologies and enable mobile workers to maintain enterprise presence anywhere in the state.

3. In 2008, the wireless contract will be rewritten and we will enable seamless roaming from state facilities to commodity wireless networks (WiFi-cellular convergence) for voice and data services.

4. By 2009, we will ensure seamless services delivery between wire-line and wireless networks for voice and data.

Data Communications

1. In 2006, MDIT will centralize and rate services of the local area network (LAN) within Telecommunications. We will then upgrade bandwidth for all state agency sites and increase the multi-media transport capabilities of the data backbone. The security of data network entry points will be increased, which will enable the increase in targeted use of secured (virtual private network [VPN] commodity transport from Internet service providers[ISP]) for non-critical small-office, home office, and mobile-office sites and users. The number of intranet WiFi overlays will be increased to further enable the mobile state workforce.

2. In 2007, we will upgrade to very-high bandwidth (>=10Mb) for large (>150 users) state offices and pilot high-speed wireless data trunks or mesh network overlays on state campuses. We will also develop network-based user authentication, certification, and authorization security services for the intranet.

3. In 2008 we will integrate the wire-line and wireless backbones and upgrade to very-high bandwidth in intra-metro and metro-campuses.

4. In 2008, we will increase commodity VPNs for intranet sites and begin developing new contracts for "2nd decade" technologies.

5. Beginning in 2010, MDIT Telecommunications will begin the "2nd decade" technology refresh cycle for voice, wireless, and data communications.

The Vision of Michigan Public Safety Communication System

The events of September 11th, recently repeated in Egypt and London, provide an important lesson - effective interoperable communications during times of crisis are a matter of life and death. Recognizing the concerns over hometown security and the real threats to our safety, Michigan has elevated the criticality of interoperable public safety communications as a component of the information technology infrastructure deployed on behalf of the citizens and visitors of this state.

When public safety communication systems are interoperable, police, fire, and EMS staff responding to an incident can talk to one another to coordinate efforts. Specifically, interoperability refers to the ability of first responders and their commanders to share information via voice and data signals on demand, in real time, where needed, and as authorized.

Interoperable communications, from an IT perspective, means across the enterprise all first responders (state, local and federal agencies) can wirelessly communicate through a common network. A central Network Communication Center continually monitors the system, activates special talk groups during events, enforces system security measures and allows for safe, encrypted communications. Access to specific radio talk groups is well-planned and assigned to different groups of users.

Michigan is aggressively promoting interoperable communications for the estimated 79,000 first responders helping protect citizen safety. Four initiatives have been identified to meet the overall goal to "Provide fully interoperable communications amongst first responders for crises."

1. Complete tactical communication plan for interoperable communications by end-of-year 2006.

   A Michigan Public Safety Communications System (MPSCS) Advisory Board was appointed by the governor and is charged with coordinating the development of the Michigan Interoperable Communications Plan (MICP). The MICP will: a) define in times of emergencies, who must talk to whom, and when; b) assess where MPSCS and other business practices are today to support emergency situations, and c) identify gaps between today's practices and technology and where Michigan needs to be to meet the overall goal.

2. Development of strategy to bridge the gap identified in assessment of current ability to achieve interoperable communications (fiscal year 2007).

   The MICP will identify gaps between today's practices and technology to meet the overall goal. During fiscal years 2006 and 2007, the strategy to bridge the gaps will be detailed and necessary resources will be either redeployed when possible or enhanced as authorized.

3. All first responders will have interoperable communications by 2008.

   The initiative will strive to insure that all first responders are either MPSCS members or the public safety communication systems they use are effectively integrated with MPSCS in times of emergencies.

4. Assure continuity of interoperable communications for first responders by 2010.

   Part of the overall strategy is to insure the system is financially secure so that upgrades, expansions and life-cycle replacements are handled uniformly and expeditiously.

Michigan's Next Step for Communication

Michigan's chief information officer (CIO) has established a task force to develop a consolidation strategy for the state's communication systems. This task force, comprised of MDIT Telecommunications and MPSCS staff, will provide on-going strategic planning, including:

- Defining requirements of the various types of communications, such as how fast, how reliable, how secure, how widespread, etc.
- Assessing the capabilities of existent and emerging technologies to meet defined requirements of the various communications types
- Selecting the communications technologies required to meet the various needs
- Determining the steps that must be taken to develop the infrastructure to support the selected technologies

Some of the items the task force is currently considering include the criteria, requirements, and redundancy in current and future communications; coverage area (state geography); future technology and media direction (e.g. wireless); 700 MHz spectrum range; VoIP and IP telephony; and business continuity planning.

Upon successfully completing this planning process, Michigan will have the tools to make informed decisions regarding the application of technologies to meet the State of Michigan's communication needs. This careful consideration will enable Michigan to wisely invest in its communications systems. Michigan will also realize the following key benefits:

- Advancing the technology base of the State of Michigan, thereby attracting new technology businesses
- Building new opportunities to share infrastructure, applications, and contract savings with local governments
- Enabling more rapid and cost-effective development of citizen-serving applications and communications channels to citizens, providing more opportunities for "always on" citizen services and information availability

Appendix J - Agency Services Plan

Agency Services Strategic Plan

Table of Contents

Agency Services Strategic Plan Goals

The Agency Services Strategic Plan was developed to address the vision, goals and planning specific to the functions of Agency Services, which include the interface to the Michigan Department of Information Technology (MDIT) clients as well as the integration of information and communication technology with the business and service needs of the State of Michigan. The Agency Services Strategic Plan is closely aligned with the Cabinet Action Plan and is integrated into the overall Michigan IT Strategic Plan.

The vision for Agency Services is expressed through three overarching strategic goals. First, we want to continue to standardize and improve our processes, staff, and service delivery en route to becoming a "world class" IT organization. Upon that foundation, we continually strive for alignment with our clients to ensure the best use of their resources by delivering strategic IT projects that support the priorities of the state agencies and the governor. Finally, we recognize that the closer we are as a strategic partner to our clients, and as we have a broad view of all of state government's processes and services as well as a view of the future horizon of technology, we are in a unique position to transform government services through business process redesign and innovative IT solutions for our client agencies.

World Class IT Organization

To standardize our internal processes and improve our service delivery, we have prioritized six initiatives for fiscal year 2006.

- Service level agreements
- System development life cycle
- Consolidate development toolsets
- Align employees skills to future needs
- Rated services for application development
- Standardize demand management processes

First, we have chosen to shore up and improve on the service level agreements we have with our client agencies as they are the foundation for all service delivery. Next, we recognize the benefits gained from standardized development processes, so we are working on a new system development life cycle geared to qualify for Capability Maturity Model Level 3 once it is fully implemented. We also recognize that consolidation and standardization of our development tools will allow for efficiencies in hardware and employee skill sets. We also acknowledge that as technology changes at an ever increasing pace, we will need to update our employees' skills so we are embarking on a project to create a complete enterprise skill set inventory and create roadmaps for the development of the future's critical technical skills. We also believe that a funding model based on rated services will allow for greater transparency and control for our clients and allow for improved flexibility and efficiencies in our ability to provide services. Finally, we recognize the need for a standard process for interfacing with our clients around demand management and planning processes that will enable our growth as a strategic partner.

Strategic Alignment

To grow as a strategic partner with our clients, we are beginning by gathering their priorities and desired outcomes. The identified top priorities fall into the following six categories:

- Improving student achievement in Michigan
- Sustaining and creating business investment and jobs
- Making Michigan's people healthier and our families stronger
- Protecting our citizens and making our communities safer
- Enhancing the quality of Michigan's natural environment
- Making government in Michigan more cost effective and efficient.

These are the priorities we will support by aligning our services and software to the needs of our clients. In cooperation with them, we are setting the direction of the many IT projects and initiatives that will enable our clients to achieve their desired outcomes.

Transformed Government

Finally, we believe that our unique position, with a broad view of government and a forward-looking view of technology, gives us the opportunity to propose true transformations in government services through innovative IT solutions and process improvements. Once again, this process is one we undertake in lock-step with our clients.

After surveying the present for clues of the future global, national and state business drivers, and after examining emerging technology opportunities, we have worked with our clients and agreed to pursue architectures and software that will support transformed government services around:

- Mobile workers
- Data sharing and integration
- Enterprise service centers
- Citizen self-service transactions
- Collaboration tools
- Shared administrative services

We are working on project development and planning for leveraged platforms for shared value among our clients in these areas in the current and future fiscal years. We believe that by focusing our energies and resources in these areas we can continue to provide innovative services and solutions and best prepare our client agencies for the future.

The Future

The current Agency Services Strategic Plan is designed to be the guide for our organization through a rolling 1 to 3 year time-frame. On an annual basis we undertake a process to revise and realign our plan to that period, while also looking to the longer 3 to 5 year horizon as we preview emerging technologies and seek future business foci and drivers.

Appendix K - Technology Solutions

Technology Solutions

Table of Contents

Technology Solutions

As part of Michigan's IT strategic planning process (see appendix A), the Michigan Department of Information Technology (MDIT) and its clients, via the Michigan Information Technology Executive Council (MITEC, see appendix D), examined technology and government business trends and their impacts on each other. They reviewed both personal professional observations and key worldwide trends as explained by industry experts, including Gartner and Forrester. The result of this exercise was the identification of which technology solutions might play the greatest role in improving government services in Michigan.

MITEC, in close collaboration with MDIT, chose these seven technology solutions for further investigation of their possible enterprise-wide adoption. Since these technologies were selected, seven subcommittees comprised of representatives from MITEC and MDIT have reviewed where these technologies may apply to specific agency clusters and the state as a whole. The subcommittees are now preparing business case analyses of the most promising projects for each technology with the intent to integrate these technologies into the upcoming budget cycle recommendations for funding enterprise projects.

While the chosen enterprise pursuits will be only a small subset of ideas discussed, MDIT will continue to work with its clients to identify the clusters of agencies that can benefit most from pursuing other promising ideas. It is anticipated that some part of each of these technology groupings will be adopted by some collaborations of agencies throughout the state, realizing the leveraged technology promises of a statewide consolidated IT department.

Relationships among the seven technologies

Synergies and dependencies exist among the seven technologies. Figure 1 represents the relationships among the technologies. Examples of the relationships include:

- **Integrated infrastructure:** Each of the solutions is enhanced having an integrated infrastructure. An integrated, modern infrastructure enables the adoption of new technologies and provides the means to link the technologies into a standard tool box available for state applications.
- **Data integration:** A data integration approach enables citizen self-service, enterprise contact center, and shared administrative services by providing a common repository of data from multiple sources to be shared among multiple sources. A citizen could renew a vehicle license plate and pay her taxes online during the same transaction, applications, such as a data warehouse, would share appropriate information among the multiple state agencies involved. Likewise, help desk staff at an enterprise contact center would be able to answer questions on multiple topics from any caller by accessing information shared in the data warehouse.
- **Collaboration tools:** Collaboration tools will enable mobile workers, contact centers, and shared administrative services by enabling workers to communicate with each other using any of a suite of tools. A specialist could contribute from home during his convalescence from podiatric surgery by using collaborative

document editing tools and video conferencing to help his team complete their biennial strategic plan. Or a contact center staffer could instantaneously locate and communicate with a subject matter expert, via instant messaging, to answer a citizen question without having to hang up the phone.

- **Enterprise contact center:** The enterprise contact center approach integrates with and enables efforts in all of the technology areas. The state could staff its contact centers with workers physically located anywhere in Michigan at any time using mobile worker technologies. Enterprise contact center technology can provide a multi-channel point of contact for handling routine back-office functions and answering citizen requests for information.

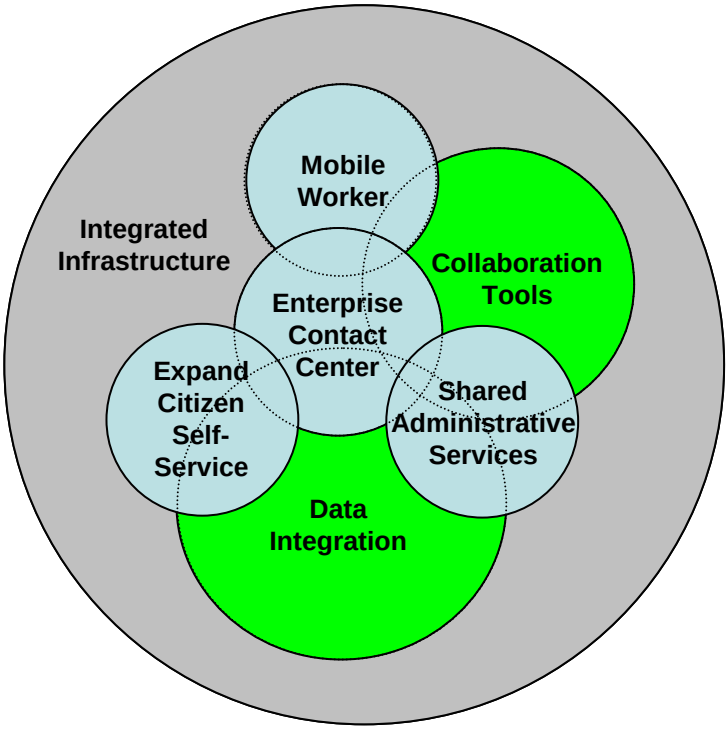


Figure 1 – Seven Technology Relationships

Seven Technology Detail

The following seven sections provide detailed information about the seven technology solutions. Each section begins with a brief description of the technology area and follows with an analysis of how the technology can effect change in the way the State of Michigan serves its constituents. MDIT will continue to work with its clients to ensure that the optimal mix of these technologies are adopted and leveraged by all appropriate stakeholders including, but not limited to, the various agencies of the State of Michigan.

Collaboration Tools

Collaboration has become a daily necessity for conducting state business, and is typically conducted through a variety of disconnected systems—including telephone, email, fax, messaging, and Web conferencing. These systems, and the collaborative content created by them, are managed and stored in repositories, such as databases, file systems, and Web servers, that are spread across departments. The volume of collaboration and its associated information is only growing, and departments are finding it difficult to ensure security, manageability, and timely access to information and applications.

"Electronic Collaboration Tools" are typically a set of tools or a single tool to facilitate participation and complement face-to-face meetings and allow employees to work together in real time without face-to-face interactions.

A unified workplace includes collaboration tools such as:

- Real time communications that revolve around messaging:
  - Email
  - Voicemail
  - Instant messaging
  - Audio, video, or web conferencing
- Shared workspaces that facilitate:
  - Collaborative writing
  - File sharing and versioning
  - Membership management
  - Team decision support (voting, sorting, ranking, surveys)
  - Content services
- Coordination using Group calendaring and scheduling, task allocation and tracking, and file workflow and approvals.

Some tools overlap areas. For example, email can be used for communication between citizens and government departments. It can also enable collaborative work by allowing teams to transfer documents and information back and forth. Instant messaging is used in a similar way, as are workflow products, although the overlap is a little different. Typically they allow collaboration with and among departments, but they work with users and systems, taking information from one group's system and passing it to another group's process. Business rule engines can assist teams in applying business logic in complex workflows.

Current status of Electronic Collaboration Tools

Michigan currently uses voicemail, email messaging and audio conferencing, as well as group calendaring and scheduling and understands the benefits these technologies bring to worker productivity and collaboration. With shrinking staff and budgets the State of Michigan is looking to further increase productivity by facilitating the collaboration of it workers.

Key Benefits

Opportunities for Michigan government

Collaboration within the State of Michigan is increasingly important. Collaboration brings together resources to create interactions and synergies that can save money by increasing speed of response, improve team productivity and reduce waste of all kinds.

The State of Michigan is looking for more effective and efficient ways to:
- Schedule meetings
- Track the status of multi-person projects
- Update contact information statewide to avoid the delays and miscommunication problems caused by out-of-date information
- Communicate quickly with colleagues across the hall and around the State

An illustration of those who could benefit from the use of collaboration tools include:

Teams and Project Management	• Quickly schedule meetings with one message • Store project specific e-mail messages in a shared folder
Administrators and Executives	• Manage schedules with confidence with direct access and the ability to make updates as needed • Have task lists, project schedules and meeting notes on hand and ready for review
Human Resources	• Maintain a company directory • Post company events and holidays

The opportunities for collaboration tools abound in the State of Michigan. A few examples include:
- Web Conferencing to support all types of online meetings and applications, such as live help, support, training, and online seminars, reducing travel for employees.
- Presence awareness through instant messaging that enables users to determine whether certain subject-matter experts are available to communicate in real time.

Both components allow a customer service representative, for example, to assist a customer quickly by conducting real-time online meetings, sharing information and, if necessary, locating an expert immediately to solve a problem. The conferencing and messaging technologies, combined with calendar, content management, and self-service publishing capabilities, enable virtual teams to work more efficiently. Also, Web conferencing and instant messaging allow people have meetings sooner because shorter meetings without travel are easier to fit into calendars.

State goals achieved

Using Collaboration Tools is one way Michigan can work to provide a better government. Key executive strategies include:

- **Cut red tape**: Redesigning processes streamlines efforts, reducing time, mistakes, and cost
- **Frugal management of workplaces, tools, and equipment used to run state government**: Standardizing the IT tools used to deliver services across the state will reduce the maintenance costs associated with maintaining multiple systems that do similar work
- **Make state government both a great place to work and a place that produces great work by ensuring our government is diverse, inclusive and representative of our population:** Make sure state employees have the tools necessary to do their jobs - all while lowering overall costs.

By using collaboration tools employees of the State of Michigan will be able to become more effective and efficient in supporting and servicing Michigan citizens.

Enterprise Contact Center

Government created the service economy. Delivering service is government's primary business. Data from the Pew Internet and American Life project, *How Americans Get in Touch with Government*, May 24, 2004, suggests a synergy between multi-channel contact centers and the practices and preferences of citizens. Forty-two percent of respondents told Pew that their last contact with government was over the telephone and 29 percent said it was through a Web site. Only 20 percent reported that their last contact was in person, with the remainder indicating contact by email and conventional mail. The results affirm an orientation toward multi-channel service delivery, which can be coordinated through an enterprise contact center infrastructure and scaled to meet the growing volumes of mission-critical traffic among agencies. [1]

Customers calling the State of Michigan face a multitude of telephone numbers to reach all the different services offered. This is partly caused by technical limitations of legacy interactive voice response (IVR) technologies and by the organization of state government. Different lines of business among, and even within, agencies have separate contact center operations. The burden is on our customers – the citizens of Michigan – to find the right phone number or the right email address to receive services. New technologies in the contact center arena will enable the state to minimize numbers for the customer to call and efficiently route their call to the appropriate agent.

Description of Solution

Contact Centers were known in the past as the phone center where a telephony network connected people with agents via telephone. Today the contact center uses multiple channels of communication (phone, email, Web-based systems) to capture and deliver calls and messages to the agents who are available at single or multiple, distributed locations. The contact center is the point of contact regardless of the channel used by the caller.

The contact center infrastructure is comprised of multiple technology layers. The telephony layer includes the switch, PBX, and transport protocols such as IP telephony and voice over IP (VoIP).

The call management layer includes automatic call distribution for managing and routing calls; computer telephony integration which enables screen pops for call agents; interactive voice response, which allows callers to access the information and make the requests needed through automated telephone recordings and prompts; and universal queuing, which treats all forms of citizen contact as a single stream of inquiries and requests and allows for more cost-efficient systems by deferring email and Web site call-back requests to agents as they become available from normal calls.

[1] "Hello. The First Word in Reinvigorating the Relationship between Citizens and their Government. An Introduction to Citizen Service Technologies and 3-1-1," Center for Digital Government

Customer experience management applications include applications that provide for call monitoring and recording, quality assurance, knowledge management, workforce management, agent training and e-learning.

Customer relationship management software provides the information on the customers.

Current Adoption Rate

There are over twenty-one "511" systems currently in place across the country providing travel information, 14 of which are state systems. Virginia is looking at a platform that all local governments could share, and has already implemented 511Virginia.org – a 511 service that provides information on highways, public transportation, travel services, and 511-information for adjoining states. Nebraska, Utah, Montana, North Dakota and Kansas have added an alert system, which includes the capability for them to place AMBER Alerts, homeland security alerts, and general transportation alerts on the 511 system.

New York City, Baltimore, Chicago and other cities are using "311" for non-emergency city services. Universities are implementing 311 services in on campus and could also cover state and regionalized federal services. Supporting traveler information systems are traffic cameras and other technology.

Thirteen states offer full "211" coverage, connecting people with community services and volunteer opportunities. 211 currently serves 14% of Michigan's population with service available in Calhoun, Kent, Kalamazoo, Ottawa and Jackson counties.

Michigan

Continuation of each business unit developing their own solutions means that some are continuing to use old technology that requires physical changes to the switch rather than utilizing soft applications. Additionally, multiple solutions are being put in place – requiring more resources to support a complex and heterogeneous environment. Even where the business units are using the same applications, they are being customized differently, reducing the possibility of tying the applications together even for business continuity efforts. And some agencies that have a need do not have the financial resources to put another stand-alone system in place.

The need for call centers in the state has grown significantly over the past five years within business units. The Department of Treasury implemented a call center that supports revenue collection using a full complement of CRM, automatic call distribution, computer telephony integration and interactive voice response. The Bureau of Unemployment Services was able to close regional offices because of efficiencies gained through its Remote Initial Claims Centers. The Office of Retirement Services and Department of State are putting call centers in place. The Department of Natural Resources has outsourced their campground reservation call center. Departments of Human Services and Community Health have also outsourced call centers.

The State of Michigan has made great strides in providing more convenient services to the citizens of Michigan. Our next step is to take a comprehensive look at how we can utilize our current investments to create new opportunities and ease access for the citizens.

Key Benefits

Opportunities for Michigan

MITEC identified several opportunities for Michigan to explore that could be available if we take an enterprise approach towards implementing contact centers. These opportunities would bring greater efficiencies to state and local government but would be too costly to implement without having an enterprise infrastructure in place. This is only the tip of the iceberg – one cannot even imagine the possibilities that will arise a few years down the road.

Examples of where we could benefit now include:

- Creating a single access point for constituents to contact the State of Michigan for services (1-800-Michigan); Integrated 800 #s; MDOS (1-800-Call-SOS)
- N11 Services – 211,311, 511, 711 Services to Relieve Overburdened 911 Systems. Creating an enterprise call center infrastructure would also open new opportunities for supporting local government – such as through 311. An enterprise contact center would position the State of Michigan to take advantage of the unique benefits of IP contact center technologies and applications to combine voice, data, web, and e-mail traffic of client requests from various sources. This can facilitate and streamline the delivery and implementation of shared e-government service portals, thereby streamlining the number of governmental employees required to support N11 services while providing higher levels of flexibility and automation for these services. A 511 service can benefit highway patrol offices by reducing calls from travelers asking for road condition and weather information. Several states have incorporated Amber alerts into their 511 systems.
- Department-specific functions such as Civil Service (HRMN), eligibility determination and application, business profiles for MEDC account managers.

Goals Achieved

Moving on the path of the enterprise contact center will bring more opportunities for advanced customer service, and the centralized contracting, oversight and management will achieve economies of scale in purchasing, contracting and support as well as interoperability. The interoperability of these systems is necessary for integrated voice/data applications such as unified communications as well as for creating a mobile work force and using virtual teams to offload in peak hours. Greater efficiencies will result when we have the opportunity to manage peak seasons by using staff across call centers.

Better government means improving the effectiveness and efficiency of the delivery of services to our customers. An enterprise contact center would enable more resources to be directed to the program services instead of towards replicating programs throughout the state. Improving the effectiveness and efficiency of the

delivery of services to our constituents means that more resources can be directed to the services themselves.

Standardizing the call center infrastructure would enable the State of Michigan to efficiently support agency call centers by reducing the complexity of the environment and dedicating resources to support the contact center infrastructure. It would also enable the reuse of components from previous developments. An enterprise contact center infrastructure would enable efficient use of system capacity and reduce costs for ongoing maintenance by limiting the number of point solutions in place. By leveraging a common infrastructure, the State of Michigan can more economically take advantage of new technologies to improve citizen access to the state (speech recognition) as well as offer workers more flexibility (use voice over IP to enable workers in remote areas, remote-workers).

Next Steps

The first step for the State of Michigan is to focus on the existing call centers and those currently in the planning stages. It is imperative that we develop a telecommunication center of excellence to support standard call center technologies and create the positions to staff this center of excellence. Required policies for planning, security and technology must also be developed. Tighter coordination with DMB Acquisition Services must occur to ensure that any invitations to bid or outsourcing contracts with call center or contact center technology are submitted for MDIT review and signoff. We must then identify the standard products and platforms required for supporting an enterprise call center infrastructure. In order to even consider virtual call centers and the benefits that could be achieved by balancing peak call times across call centers, the state needs to standardize on these common tools, including a common IVR platform. And where, possible, we need to evaluate consolidating facilities.

We can then begin to address those call centers that are currently being outsourced. MDIT will conduct a feasibility study and ROI analysis for in-sourcing existing outsourced centers, including capacity planning and ongoing support and maintenance as well as develop a long-term plan for incorporating these centers into an enterprise solution.

Future state planning will include building the virtual contact center. Virtual contact centers allow multiple physical locations to operate as a logical center. Calls and other contacts are routed independent of physical location. This would enable the use of work-at-home technologies as well as provide for redundancy across locations. The business case for the development of an enterprise virtual contact center includes looking at the feasibility of the executive branch agencies usage as well as where localities could benefit from this type of infrastructure. This is where we can look at strategies for providing N11 services – for travel, community services, etc. A feasibility analysis will also include the support strategy and long term staffing needs for the state to move in this direction.

References

Gartner: Create a Company-Wide Plan for Automated Speech Recognition, Steve Cramoysan (12 March 2004)

Hype Cycle for Human Computer Interaction 2005, Jackie Fenn, Alexander Linden, Steve Cramoysan, Toby Bell, Bern Elliot

Hype Cycle of Contact Center Infrastructure 2005, Bernard Elliot, Bob Hafner, Esteban Kolsky, Steve Cramoysan

www.211.org

www.deploy511.org

Data Integration

The State of Michigan's executive branch consists of 20 separate departments and multiple agencies. Each department is designed to provide government services with a particular policy orientation. As a result, state departments and agencies interact with citizens, businesses and other governments on a daily basis.

Over the past decade, these disparate departments have begun to interact and collaborate on projects, initiatives and policy direction. Driven by the governor's statewide priority areas (e.g. The Economy, Health and Human Services, etc), all 20 state departments have come together to work toward a state-wide vision of goals. Challenged to redesign, realign and redefine state government, these departments have developed, through the Cabinet Action Plan and Budgeting for Outcomes, shared programs, projects and initiatives to serve the citizens of Michigan today and in the future.

As a result, the need to develop a common method of communicating, sharing and bringing information to decision-makers has grown increasingly important. However, today's enterprises, especially government, are drowning in a sea of unorganized data, unable to leverage its full potential. Specifically, the State of Michigan is challenged to understand and share the information that exists in its various departments. Departments and agencies are not able to get the information they need because they do not understand what information may be available and cannot link information from multiple sources. These agencies are unable to make optimally beneficial proactive or reactive decisions because they do not have information in a timely manner, even if it presently exists in the state.

For the State of Michigan, the time to address data integration, sharing and knowledge is now! We have more information today than ever, and advances in technology enable the sharing of this information with decision-makers anywhere at anytime via multiple devices connecting with land-based or wireless networks.

Integration Challenge

A variety of issues surround information integration in government, including information ownership (once shared), privacy and access, data quality, security, legal concerns and statutory requirements, trust, business operations, and the overall culture of agency interactions and public relations. All must be addressed in order for an integration initiative to be successful. Silos of information that exist to serve the programmatic and service delivery needs in justice, public health, homeland security, environmental protection, social services, and others could be made accessible across the enterprise in a secure, structured and collaborative manner. Such access provides benefits that outweigh implementation costs, such as reduction of redundant data entry, improved data integrity, increased accuracy and immediacy, and improved decision-making.

Current Adoption

According to Gartner, there is an 80 percent probability that "through 2008, the creation of an accurate, timely and rich single view of the customer across channels and lines of business will be a key enabler for reducing costs, managing risk, and increasing revenue and profitability in customer-centric organizations."[2]

The State of Michigan has already begun to realize benefits from data sharing and integration. In the Teradata warehouse, the State of Michigan currently is sharing over 2 terabits of information, which equates to approximately one-tenth of all of the books in the largest library in the world, between five state agencies. Additionally, agencies are working to develop data sharing agreements for projects that involve multiple agencies. Specifically, the Child Support Enforcement System (CSES) currently shares information between Department of Treasury, court systems, Department of State, and Department of Human Services to ensure that child support payments are paid on-time.

Key Benefits

Overall Benefits

Many benefits will emerge as a result of data sharing, integration and knowledge, including:

- **Improved Communication:** For the State of Michigan, one of the most important benefits from integration is the improvement of communications between departments, agencies and even among workers within their own agency.
- **Improved Decision-Making:** As a direct result of improved communications and up-to-date information access, key managers and personnel will be able to make proactive and reactive decisions faster and more accurately.
- **Enhanced Service Delivery:** Across the entire spectrum of involvement within state government, the ability to easily access reliable and accurate information is essential for enhanced service delivery. By sharing across programs, agencies, and even other governments, the State of Michigan will have better information to use in providing better service to the citizens, businesses, governments and employees it serves.

State Government Goals and Business Drivers Accomplished

The concept of data integration, sharing and knowledge is one way in which the State of Michigan can work toward providing a better and more efficient government. Breaking down silos and leveraging what information we have between agencies will enable quicker decisions and more satisfied constituents. Specifically, this technology will provide a foundation for the State of Michigan to achieve some of its most important goals and strategies as defined in the 2006 Executive Budget Book.

[2] Radcliffe, J. (7 Oct. 2004) Create a Single Customer View with Customer Data Integration, *Gartner,* 2.

Opportunities for Michigan government

The opportunity for data integration, sharing and knowledge abound in the State of Michigan, either across all agencies or clusters of agencies with closely knit business requirements. The Michigan Information Technology Executive Council (MITEC) has already identified examples which include,

- **Human resource information:** Having one trusted source for all human resource information will enable streamlined efficiencies for administration
- **Integrated health system:** Being able to have one system for Medicaid and all public and mental health information is critical to ensure citizen safety and administrative efficiencies to lower our exponentially growing medical costs
- **Criminal justice information**
- **e-Procurement**
- **State-fair applications**
- **Homeland security subscription notification**
- **Environmental data**
- **Integration of DCH and DHS data**
- **Treasury and local units of government (principal residence)**
- **Case management system for each Michigan citizen**
    - Birth records
    - Death records
    - Driving records
    - Tax records
    - Courts
    - Independent data sources (SSA, IRS, etc)
- **Business registration process (UIA, Treasury, DLEG)**
- **Income eligibility integration (TANF, lunch programs, housing assistance, school loans, etc.)**

Expand Citizen Self-Service

Whether it's using an ATM to get cash at midnight or a kiosk to check in before a flight instead of waiting for a ticket agent, self-service has become commonplace.

Credit card companies offer cardholders the option of checking their balances, making payments or applying for more credit over the phone and online. Gas station customers can fill up their tanks and pay at the pump.

Meanwhile, 68 percent of U.S. households have Internet access, with penetration expected to grow to more than 77 percent by 2009. With this access comes the expectation for on-demand, self-service options for doing business with state government.

A large portion of this business will be done online. Across the nation, the Internet portal is expected to replace the phone as the primary channel for citizen and business government interaction. How quickly this happens depends on shifting demographics and how well government portals address their customers' concerns.

As the teens that have grown up instant messaging while talking on the phone, listening to music, watching TV and doing their homework reach the age groups requiring more contact with government, there will be significant shift to greater interaction through portals.

More and more, citizens will demand information, access and service around the clock. Conveniently. Cost-effectively. Securely.

At the same time that demand grows, budget constraints require technology solutions that allow government to provide more services, faster and more efficiently – with fewer resources. And, by the way, these solutions must also be easy to use and make transactions seamless.

Benefits and challenges

Citizens benefit from increased access, whether they live in the Upper Peninsula or Detroit; whether they work 8-to-5 or the graveyard shift; whether they're on their home computer or a laptop at a state park.

There are real benefits to government, too, including a single portal of constituent access. Customers can input their information once, and this information can then be shared by the appropriate government agencies, ensuring data that is up-to-date and more accurate.

One of the challenges is for government to understand how citizens use services in order to increase their use of online services. It's not enough to drive citizens online. Government needs to adapt its internal processes and overcome its traditional structure to allow for inter- and intra-agency collaboration.

Another challenge is that moving toward self-service also requires an infrastructure that supports automating electronic payments. While this can bring cost-savings – both from efficiencies and per-transaction – it also means investing in solutions and processes with a high-level of security.

The future

This area is expected to grow in coming years. Michigan is pursuing and investigating technologies that enable self-service, including centralized contact centers, self-service stations and online Web portals. As technology advances and can handle more complex interactions, more constituents will be comfortable using technology as their primary point of contact.

MDIT is working in conjunction with the its 19 client agencies to explore which projects would benefit from this technology to improve productivity and efficiency.

Already, Michigan offers many services and transactions as self-service options. Drivers can use self-service stations at Secretary of State offices to renew license plates, significantly cutting their wait time and allowing employees to provide better customer service to clients who have more complex transactions. Unemployment services can now be requested over the phone and online.

Future use of these technologies includes self-service stations where a citizen can renew a driver's license, buy a fishing license and get travel directions – all from a state office, retail store or library.

Entrepreneurs or industry could also have an easier time doing business in Michigan with more access to forms and information online or through a central call center. Or they may self-report to meet IRS or Environmental Protection Agency requirements and file their unemployment tax information online.

Integrated Infrastructure

Information technology developed independently in the various agencies within the State of Michigan. As the agencies made individual decisions of what technologies to use and how to maintain or upgrade them, the statewide technology infrastructure grew increasingly complicated. This diverse infrastructure of computers, telephones, information storage devices, and computer programming methods prevents Michigan from realizing the optimal value of information technology in the following ways:

- ***Support costs:*** The diverse components that must be supported require diverse skill sets, including those held only by employees who will soon be eligible for retirement.
- ***Procurement costs:*** Volume purchasing discounts are lost when purchases are distributed among too many technologies.
- ***Interoperability:*** Disparate technologies prevent the interoperability of multiple systems, causing redundancy in back-up, information storage, and telephone systems.
- ***Aging technologies:*** The state's currently installed technologies often do not support the technology applications needed to move Michigan forward.

Achieving an integrated infrastructure would move Michigan toward realizing all of the benefits that IT centralization promises. Michigan's integrated infrastructure would consist of two main technology foci, centrally managed voice systems and the "Michigan/1" program.

- ***Centrally managed voice systems:*** Providing the central management of voice systems throughout state government enables economies of scale in the purchase of equipment and provision of support to state telephone systems. A consistent implementation of telephone systems across the agencies also allows for those systems to work together, ensuring that call and voicemail transfers are seamless across state government. Finally, central management of voice systems provides an opportunity to move the state's system forward with new telephone technologies, such as voice over Internet protocol (VoIP), that provide the foundation for contact centers, mobile workers, and many other trends in how government does business.
- ***Michigan/1 program:*** Michigan/1 is a vision for the baseline infrastructure of the state's computing environment that will merge 20 separate agency environments into one, resulting in reduced costs and improved services. Program components include:
    - Active Directory office platform technology (ADOPT): Will provide a common technology set-up for offices across the state, including standardized computers and the capability to remotely update or fix computers.
    - Messaging consolidation: Will bring all state email users into one of two common email installations, and all state email infrastructure has been re-designed for optimal cost-effectiveness.

- Storage / back-up: Provides shared solutions for storing the state's data and protecting it with back-up procedures.
- Hosting center server centralization: Will host the servers currently distributed in nearly 30 data centers across the state in three state-of-the-art, centralized data centers.
- Enterprise metrics monitoring: Will track state systems automatically, alerting staff when repairs are necessary.

Current status of integrated infrastructure

Moving toward an integrated technology infrastructure is common among businesses involved in merger and acquisition activity. The merger of information technology departments from the 19 agencies into the MDIT has provided similar opportunities for the State of Michigan. Michigan has begun the integration, as highlighted:

- ***State telephone systems:*** MDIT is presently responsible for more than 35,000 telephone lines throughout the state, providing central management of installation, maintenance, repair, and contract negotiation. Additionally, MDIT offers software design and support for features such as voice mail and call centers throughout the state. MDIT staff expertise and consultation is available to all State of Michigan phone users, including those that presently contract their phone services outside of MDIT.
- ***Messaging consolidation:*** MDIT has designed and begun the transition to a standardized installation for all email users throughout the state. The final design will result in consolidating 700 email servers throughout the state into 70 centrally-hosted and maintained email servers, resulting in a significant cost savings and better messaging interoperability among agencies.
- ***ADOPT:*** MDIT has designed and begun the effort to standardize office technology installations throughout the state. Once completed, the state will realize significant cost savings through reduced purchase and support costs.
- ***Hosting center server centralization:*** The State of Michigan presently maintains three central server hosting centers that offer convenient state-of-the-art support options for all state agencies. Servers are presently being moved into the hosting center as agencies recognize the benefits of server hosting or as they acquire new servers.

Key benefits

Opportunities for Michigan government

The State of Michigan benefits not only for immediate reasons such as cost savings and service improvements, but also in the fact that future technology applications will require a modern, integrated infrastructure. Some of the future opportunities that will build on the integrated infrastructure include:

- **Contact centers:** An enterprise contact center strategy, where Michigan citizens can contact state government via convenient channels, relies upon having standard phone and computer systems. Various state employees, at various physical locations, will be available to answer citizens' needs at the

touch of a phone or click of a computer mouse. In order to truly function as one face of government, those employees' phone and computer systems must be able to communicate effectively using standard technology system designs.

- **Unified communications / messaging:** As citizens increasingly turn to alternative communications channels such as email and Web access, state employees will need the ability to simultaneously respond with various media. Standard, interoperable technologies will enable employees to monitor and use telephone, email, and Web interfaces as easily as traditional face-to-face interactions.
- **Virtual teams:** Government employees will have to collaborate, across agencies and locations, in order to most efficiently deliver the services that citizens demand. The technology tools that will allow these employees to share data and information will require that an integrated infrastructure provides the link among all agencies statewide.
- **Mobile work force:** As more state employees work outside of a typical office environment or work from multiple offices, new technologies will be adapted to enable the mobile worker. A worker will carry her telephone number with her, having immediate access to a phone line anywhere she connects her computer to a network. She will have access to any state application she needs, from any state building or from home. She will be able to check email via the telephone. All of these capabilities are built on the foundation of a modern, integrated infrastructure.

State goals achieved

Implementing an integrated infrastructure is essential to Michigan's providing a better government. Integrated infrastructure efforts align with several State of Michigan executive strategies, including:

- **Cut red tape in state government by streamlining services and implementing innovative technology to reduce time, mistakes and costs:** An integrated infrastructure enables MDIT to better support the state's information technology needs. A modern infrastructure will also allow the state to adopt new applications to help employees provide government services more quickly, with fewer mistakes, and at a lower cost.
- **Frugally manage the workplaces, tools and equipment used to run state government and continue to cut government costs:** Integrated infrastructure will allow the state to immediately realize sustainable operational efficiencies as support and acquisition costs of technology are reduced.
- **Offer fast and friendly service to all citizens, whether online or face-to-face, by increasing the number of online services and developing a citizen satisfaction survey to measure performance:** Having an integrated infrastructure provides the foundation upon which the state can build with new technologies to deliver better service to Michigan's constituents.

Integrated infrastructure is a key means to achieve Michigan's IT goal of "manage technology to provide better service and faster delivery." The cost savings, support improvements, and development efficiencies made possible by infrastructure

integration provide a basis for better managing the state's technology. Having an integrated infrastructure will also enable new efforts to "transform Michigan's services through sharing and collaboration" as we remove the technology barriers between agencies. Integrated infrastructure improvements will provide both immediate and continuing returns to the State of Michigan.

Mobile Worker

Whether it's a Michigan State Police officer patrolling interstate I-75 or a Human Services case worker interviewing a client at their home, government employees are providing services to citizens outside of their offices. It is because of services like these and the changing demands of Michigan's workforce that the concept of the mobile worker is being investigated.

Forrester defines the mobile workers as "employees whose jobs intrinsically require them to be out of the office and in the field. They range from traditional field service engineers to delivery drivers to government inspectors. For these workers, access to information systems, such as real-time task scheduling or emergency response, improves their effectiveness and productivity — but even without such access, they would still need to be in the field."

For State of Michigan employees, the concept of being in the field is critical to getting the job done. However, mobile workers today are not able to gather, access and process data while out of the office at remote locations. Instead, valuable time is wasted in travel back and forth to state offices, data is collected and entered multiple times increasing error rates, and current mobile workers are not able to complete transactions while at remote locations. As a result of this delay in service and inefficiency, the state is not able to deliver constituents services where they are needed, when they are needed.

Adoption of the mobile worker

With the growing demands for improved productivity, reduced costs, 24 x 7 service, non-traditional work structures and schedules, and specialized employees, remote access to information and services is increasingly required. And, as Thomas Friedman in "The World is Flat" points out, intellectual work and intellectual capital can be delivered from anywhere. The State of Michigan must adapt to the demands of the changing world by expanding Michigan's services to reach anyone, at anytime from anywhere.

And this is exactly what the world around us is doing. According to AMR Research, 35% of all workers are currently mobile, and their numbers are rapidly rising. Additionally, IDC predicts that 66% of the workforce will be mobile by December 2006, and more than three quarters of U.S. organizations will have adopted wireless technologies by mid 2005.

Both the private and the public sector have found increasingly easy and valuable applications for this concept. Some examples of successful implementations include:

- Eastman Chemical has implemented WiFi to enable its 600 acre Kinsport, Tennessee campus. By doing so, its warehouse workers can now track inventory on PDA's while its engineers monitor chemical mixtures from their laptops.

- New Orleans has slashed crime rates. Wireless surveillance cameras in a high-crime area contributed to a 57% drop in murders within six months of deploying a pilot wireless network.
- Baltimore keeps officers on watch longer using outdoor wireless access points, so reports can be filed directly from the beat on cruiser computers, eliminating the time required to file at headquarters.[3]
- Cleveland steps up productivity. Building inspectors use laptops to collect and send inspection data wirelessly back to the office — reducing the time for permits to be granted.
- Buffalo, Minnesota, utility readers use ruggedized tablets and connect to an 84-node mesh network to send meter readings immediately back to the utility billing system — reducing costly manual reconciliation and re-entry of data
- Buffalo, Minnesota, advances city services. Repair crews receive wireless alerts about new potholes while they are, literally, on the road — improving fix time.
- Boulder, Colorado, uses wireless data networks and GPS to track bus locations and thus can report vehicle arrival times on the Web and at select bus stations.
- The Florida Keys Mosquito Control District uses Cingular's GSM/GPRS/EDGE network to support monitoring and control of more than 61 vehicles to optimize mosquito control and ultimately contain the West Nile virus. 6 Municipalities with large swaths of land or small numbers of mobile employees turn to cellular carriers rather than deploy their own networks.[4]
- Monterey, California, plans a wireless cloud to extend the network to enable remote control of park irrigation systems, alarm systems, traffic lights, and ball field lighting, to save city employees trips to manually change hardwired settings.

Additionally, the State of Michigan has begun to move toward the mobile worker concept. Some examples of this include:

- Inspectors from the Bureau of Construction Codes are currently using rugged laptops on-site to perform inspections. Inspectors are able to log-in at home before coming to work in the morning to upload yesterday's inspections as well as download their current day's permits
- Michigan State Police officers have the capability to access various criminal justice computer systems from wireless laptops in their vehicles
- Unemployment Agency investigators are able to document their investigations while in the field and upload the changes to the main computer systems every night from home
- Department directors and key executives are piloting the use of Blackberry communication devices to improve productivity and be more accessible while away from their offices

[3] Gartner 18 July 2005 ID Number: G00129619 "Market Trends: Mobile Wireless, North America, 2005" by Tole J. Hart

[4] Forrester "June 16, 2005 Wireless Cities Emerge Municipalities Demonstrate Mobile Enterprise Leadership"by Ellen Daley with Gene Leganza and Benjamin Gray

Key Benefits

Opportunities for Michigan government

The opportunities for the mobile worker technology abound in the State of Michigan, enabling the state to be closer to its citizens and reduce costs. Examples that warrant further investigation include:

- Maintenance and repair workers in the Department of Management and Budget
- MDOT (Survey teams), DHS, DCH
- Staffing call centers (virtual call center)
- DLEG - licensing and regulatory
- Inspections (DNR, MDA, DEQ)
- Licensing and regulatory workers (hospitals, centers, etc)
- Electronic medical information
- Tablets in MDOS branches (intake auditors, collectors)
- Field inspections (MIOSHA, UIA, Civil Rights)
- Presentations
    - Wireless projector / tablet
- Verify business information (MEDC account representatives)
- Mobile identification of citizens (MSP)

State Goals Achieved

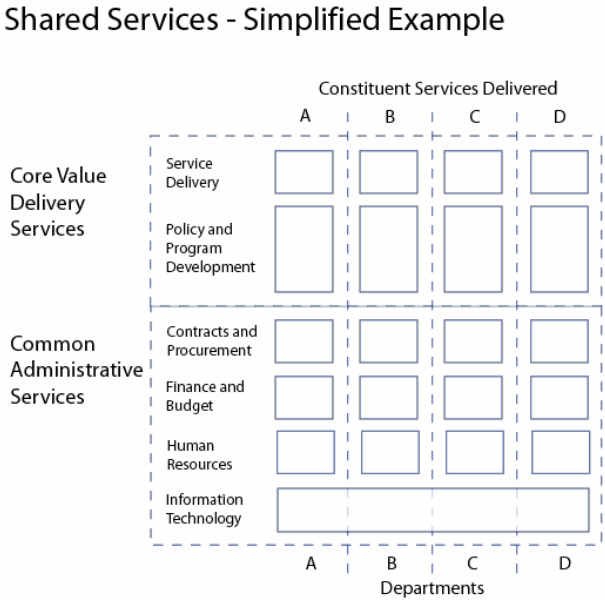
The mobile worker technology is one way in which the State of Michigan can work toward providing a better and more efficient government. Specifically, this technology will enable the State of Michigan to achieve some of its most important goals and strategies as defined in the 2006 Executive Budget Book:

- Cut red tape in state government by streamlining services and implementing innovative technology to reduce time, mistakes and costs.
- Offer fast and friendly service to all citizens, whether online or face-to-face, by increasing the number of online services and developing a citizen satisfaction survey to measure performance.
- Use the power of technology to link every community to economic opportunity by making high-speed Internet available to all Michigan households and businesses.
- Keep Michigan's people and commerce moving by improving our roads and bridges and by increasing highway safety.
- Ensure that Michigan's vulnerable citizens have access to prevention and early intervention services.
- Improve the delivery of health and human services by lowering overall costs, improving technology and streamlining the way work gets done.
- Improve homeland security by integrating resources from the State Police, local law enforcement, the Army/Air National Guard, and other agencies to ensure an effective and coordinated response to threats.
- In order to foster both environmental performance and economic growth, reduce the time it takes to issue environmental permits.

Additionally, MITEC has recognized the importance of mobile worker technologies in the accomplishment of enterprise-wide business goals. Specifically, this technology will enable the State of Michigan to gather field data electronically, provide on-site services directly to businesses and citizens, and improve working conditions for employees in rural areas.

Shared Administrative Services

The State of Michigan's executive branch consists of 19 separate departments and multiple agencies. Each department is designed to provide government services with a particular policy orientation. The figure below provides a simplified depiction of the varied functions that are contained within each department. The services available within each department can be broadly categorized as "core value delivery services" or "common administrative services." Core value delivery services include those that directly benefit the constituent and include policy and program development and administration as well as the actual delivery of services. Common administrative services include those that are necessary for government to function, such as finance, human resources, and procurement.



The state is currently structured so that each agency operates many of its own administrative services as well as its value delivery services. This has allowed the proliferation of many processes and applications to support services that are very similar across all or multiple agencies. This disparity has resulted in several problems, including:

- **Lack of optimal process design:** As services have evolved with multiple processes, some agencies have become more efficient while some have lagged. Process information sharing has been difficult across agency silos and applications.
- **Too many manual processes:** The tools used to collect information in different agencies have typically been developed to automate existing processes. This has resulted in a reliance on "paper pushing." Although the papers may be electronic, manual processing is still required as it was before.
- **Cost of maintaining separate systems:** The costs associated with maintaining multiple sets of rules and applications to accomplish the same things in different agencies can be reduced with a simplification effort.
- **Statewide management difficulties:** The collection of information in different systems with different rules has made a statewide analysis of information difficult. It is difficult to compare the performance of similar functions in different agencies because of difficulties in compiling and analyzing relevant data.

"Shared administrative services" is the identification and standardization of the common support functions across the multiple government agencies. Technology enables the sharing of administrative services by providing a common tool set to the

various agencies. Having common tools enable all agencies to adopt efficient processes, reduce maintenance costs, and provide better statewide management.

Enterprise resource planning (ERP) applications are the most common tool used to support the sharing of services. ERP applications are typically suites of modules, with each module supporting a particular service (such as human resources) and seamlessly tying into other installed modules (such as finance and budgeting). ERP systems are designed around established "best practice" processes, so that an organization adopting ERP has a tremendous opportunity to improve its efficiency by redesigning its business processes to align with the ERP functionality. ERP suites are designed to enable the optimal use of information across agencies and functions, including management analytics and reporting that allows executive management to manage from the enterprise perspective. ERP suites also enable the extension of information sharing beyond the organization's typical walls, in state government's case, for example, to include the sharing of services with local units of government or educational institutions.

Current status of shared administrative services

The adoption of ERP systems by private companies to coordinate administrative functions is widespread, with a majority of global 2000 companies using ERP. The ERP vendor marketplace is very competitive, with the major players offering solutions tailored to the demands of public sector organizations. States are using ERP to streamline operations, including examples in Pennsylvania and Florida.

- Pennsylvania has undertaken an aggressive approach to ERP implementation, using modules to standardize financial systems, human resources, procurement, and budgeting across its many agencies. These applications are expected to cut state costs primarily as they enable the shift away from paper-based transactions to optimized electronic transactions.
- Florida has used its ERP implementation to simplify collection of the more than 30 taxes it administers. These taxes were previously collected with many different systems, which processed and stored information in different places. A Florida employee was likely to have to access many different systems to help a constituent with a tax question, an act that can now be done using Florida's tax collection system. As of mid-2004, Florida had reduced its FTE count by nearly 20% and paid for its system implementation with labor cost savings alone.
- Minnesota, in its "Drive to Excellence" campaign, has taken a different approach to sharing services. Rather than adapt an entire ERP system, Minnesota has targeted services and functions common to multiple agencies. Minnesota's plan calls for establishing better processes and governance for each service, including using a common tool set. This approach enables the state to optimize processes across its agencies while gaining the maximum utilization of its existing investments where those systems can be shared.

Michigan has already seen benefits from shared administrative services. The Department of Management and Budget, for example, provides human resources and internal audit services to several agencies with which it has partnership agreements. The Department of Information Technology was formed to optimize the

delivery of information technology services to all of the state's agencies. The concept is not new, but technology can enable a broader realization of the benefits of shared administrative services.

Key benefits

Opportunities for Michigan government

Opportunities for shared administrative services abound in the State of Michigan, either across all agencies or within clusters of agencies with similar business requirements. Examples that warrant further investigation include:

- **Procurement:** Better automation and identification of the state's aggregate demand for negotiation leverage
- **Human resources:** Standardized and automated
- **Audit processes:** Capture of data to avoid duplicate effort required to satisfy internal and external auditors; enable internal auditors to work with multiple agencies
- **Human services / case management:** Having accurate information contained in one system would enable case workers to spend less time on paper work and more time helping the clients
- **Grant application and accounting:** Enable multiple agencies to share grant application information, allow for better budgeting
- **Inventory management:** Greater visibility into capitalized and expensed assets, including facilities and maintenance, repair, and operations (MRO) items
- **Budget development, tracking, and sharing:** The various operational modules can be tied into a budgeting module for more timely management with fewer errors caused by redundant data entry

State goals achieved

The sharing of administrative services is one way in which Michigan can work toward providing a better government. Key executive strategies include:

- **Keep the check book balanced:** Timely and accurate compilation of information from across the state's agencies enables better management of the budget
- **Cut red tape:** Redesigning processes streamlines efforts, reducing time, mistakes, and cost
- **Frugal management of workplaces, tools, and equipment used to run state government:** Standardizing the IT tools used to deliver services across the state will reduce the maintenance costs associated with maintaining multiple systems that do similar work
- **Maintain and improve strong, collaborative relationships with federal agencies, local governments, and the private sector via shared government services:** The adoption of ERP modules or other types of common tools facilitates the sharing of information and services among various branches of the private and public sectors
- **Better stewardship of public funds:** ERP systems can be tied into a "front-end" to enable the sharing of information with the public and public watchdog groups, ensuring that state funds are spent responsibly

Shared administrative services are enabled by information technology, but the full value of technology will not be realized without people embracing the changes made possible by the technology. The State of Michigan must use the adoption of this technology as an opportunity to "transform Michigan's services through sharing and collaboration." The adoption of an enabling technology, such as ERP, will pave the way for agencies to collaborate and change the way that they do business – it is up to the agencies to seize the opportunity to change for the better.

Next steps

Staff from the Department of Information Technology and MITEC will examine the feasibility of implementing shared services throughout the state, including the enabling technologies. This work group will work with key business personnel from across the state's departments to build a business case which will include the following:

- Common functions throughout the state that are solid candidates for shared administrative services
- The various systems, processes, and applications that support those functions
- Business requirements for selected functions that will satisfy all stakeholders
- The best commercial off-the-shelf (COTS) application suites to meet the identified business requirements

Business case results will be presented to MITEC for agreement. Upon MITEC approval, MDIT and its clients will develop a strategy for including shared administrative services in the forthcoming budget cycles, including the identification of performance and cost measurements that will justify expenditures in the Budgeting for Outcomes process.

Appendix L - IT Future Bridge & Infusion Strategies

IT Future Bridge and Infusion Strategies

Table of Contents

Infusion Strategy Purpose and Process

This appendix focuses on the vision and strategies that are required to both support the current activities and bridge the near, intermediate and long term planning horizon requirements. The near term horizon refers to 2006 - 2008 and the intermediate term refers to 2006 – 2010 and beyond. The strategy development and infusion process includes steps that are required to effectively engage leading global and national issues as well as to maximize available opportunities, including implementing a fully mature digital government and moving to a transformed form of government in Michigan. The Michigan strategy infusion process refers to a structured reassessment and redesign of goals, strategies, processes and programs while they are operating and includes the following elements:

- The shift from an information technology (IT) to an information, communication, technology (ICT) conceptualization of mission, strategies and actions
- Full implementation of an effective and mature digital government within Michigan's public sector, shifting from access and interaction to engagement and participation
- Use of information, communications, technology and process redesign to transform government goals and desired outcomes, including governance and participation, decision-making and business processes, quality and variety of services, and cross-boundary, collaborative relationships

The infusion strategies complement and are integrated with or infused into the current IT Strategic Plan goal and strategy structure as well as the Agency Services and Cabinet Action Plans. Further, they will be refined and implemented as formal goals and strategies for subsequent planning cycles. The infusion strategies are tailored to successfully engage the following global and national issues and address emerging opportunities.

Leading Global, National Issues and Drivers

- **Information:** Ubiquity of information, knowledge, and intellectual capital.
- **Connectivity and communications:** Explosion of connectivity, including the extended Internet and innovation networks.
- **Innovation potential:** Accelerating, leveraging effects of connectivity, data mining and knowledge pools on innovation.
- **Information, communications and technology (ICT) defining business and government potential:** Shift of ICT from support systems for business processes to drivers that define business and government potential.
- **Competitiveness:** Effects of global, national and inter-state competitiveness, including information, communications and technology competition.
- **New customer and worker requirements:** Digital generation, knowledge worker and baby boom echo consequences; change in IT worker and profession requirements.
- **Sourcing:** Full range of benefits and challenges of sourcing options and tradeoffs, including strengthening in-sourcing potential at the local level, including rural and outlying areas.

- **Governing by network not hierarchies:** Flattening of hierarchies through governing by network, busting of silos within and among the public and private sectors.
- **Security:** Security strategies and funding relative to need and sustained terrorism.

Selected Emerging Opportunities

- **Digital government:** Fully advance and implement mature digital government. This requires Web, infrastructure consolidation, enterprise architecture, back office re-engineering, multi-channel strategies, shifting to reduced channels, investment management strategies, performance metrics, integrated data management, borderless services and more.
- **Transformation of government:** Continue and accelerate the transformation of government through providing access and transparency, enabling participation (e.g. e - citizenship), process redesign, variety and quality of services, improved decision-making, performance management supported by technology, and other capabilities.
- **Management and investment capabilities:** Establish management, governance and organizational practices that support digital government and the transformation of government, including innovation, investment and performance management.
- **Target and effectively engage leading global and national issues**: Build on existing strengths and utilize the most effective, best practices; correct current as well as opportunity and emerging gaps; effectively identify and engage the leading, relevant global and national drivers.
- **Signature Michigan IT initiatives:** Address the issues and priorities specific, perhaps unique to Michigan. Provide issue assessment, solution and process design and IT support for selected flagship issue areas such as economic development, health care, education, agriculture, tourism, environment, security and others.

Bridge and Infusion Strategies

Information, Knowledge Management and Intellectual Capital

Strengthen and advance the use and role of information and knowledge management, and the development of intellectual capital within the public and private sectors in Michigan.

Information and knowledge management

Strengthen internal and cross -boundary public and private sector information and knowledge sharing and management.

- **Information sharing EA capabilities:** Refine enterprise architecture to enable data, information and knowledge sharing within the public sector and among the public and private sector.

- **Information service collaborative relationships**: Establish collaborative relationships and shared information based services with the Department of History Arts and Libraries (HAL), the Michigan Electronic Library (MeL), higher education, locals, and private sector as partners.

Communications and intellectual capital as communications destination / origin

Integrate the use of information, knowledge and intellectual capital as content, service and part of communication process.

- **Network connectivity:** Develop and support high capacity, statewide access to information and services, regardless of geographic location and technology or applications used.
- **Intellectual content and destination activities:** Develop collaborative relations on content and destination activities with higher education, libraries, arts, Michigan entertainment industry, virtual cultural tourism, and festivals.

IT professional roles, knowledge workers and intellectual capital

Support the development of emerging IT professional skill and experience requirements, knowledge workers and intellectual capital in Michigan.

- **IT profession transformation:** Assist in developing IT professional domains of expertise in changing and emerging areas such as technology, information, processes and relationships.
- **Training knowledge workers:** Partner with the Department of Labor and Economic Growth and higher and K-12 education to support the training of new knowledge workers and retraining of workers with legacy skills.
- **Michigan intellectual capital pools:** Help facilitate the creation of intellectual, knowledge and skill capabilities pools in Michigan.

Michigan signature, leveraged information solutions

Support and develop Michigan signature, leveraged solutions using information, knowledge and intellectual capital.

- **Smart, digital cities and communities:** Support and advance smart / digital cities and communities concept and practices, integrating with the cool cities and related initiatives.
- **UM / Google:** Support and partner with the UM / Google information, knowledge, and intellectual capital initiatives.

ICT, Digital Government Innovation, Effectiveness and Maturity

Build upon Michigan's existing best practice and accomplishment base, proactively using and developing best practices, innovation and technology planning and management to fully implement effective and mature digital government within Michigan's public sector.

Innovative processes, solutions and technologies

Maintain and expand standards of excellence and innovation to secure Michigan's future. Strengthen the capability to identify, support and implement innovative processes, solutions and technologies.

- **Independent standards of excellence:** Base the establishment of performance standards, tracking of trends and best practices on the advice and counsel of the broadest range and best skills, knowledge, experience and independent judgment available.
- **Target best practices and innovations:** Selectively adapt management and technology best practices and innovations (public, private, national and global) by aligning them and providing support to public policy priorities, agency business and services, and enterprise needs.
- **Incentives for innovation:** Identify, provide incentives for, and remove barriers against innovation within the Michigan Department of Information Technology (MDIT). Place a premium on innovation within MDIT through ongoing process assessment and openness to redesign.
- **Collaborative information, technology and science solutions:** Collaborate on integrating internal and external processes and IT solutions with other technology, science and related solutions within the public and private sectors.

Technology planning, management and targeting leading edge solutions

Accelerate and advance the technology and planning processes, including formalizing procedures and selectively utilizing leading edge solutions.

- **Formal, integrated innovation and emerging technology planning and management processes:** Identify and implement the requirements for integrating, advancing, and formalizing the innovation and emerging technology planning and management processes.
- **Provide ICT support for cabinet plan and statewide issues:** Provide IT support to the Cabinet Action Plan and agency business plan priorities and strategies, both by strengthening existing initiatives as well as by identifying new opportunities
- **Signature ICT initiatives:** Provide issue assessment, solution and process design and IT support for selected flagship issue areas such as economic development, health care education. Need to provide adequate project management, funding and partnership support.
- **Accelerate and compress analytic and action time frames:** Respond to the fast pace of changes in technology and drivers and trends by accelerating analysis, assessment and engagement with trends and drivers.
    - Expand the practical out year assessment horizon to 2010, assuming faster maturity and productivity times for selected technologies.
    - Identify, assess and adopt real- or right-time solution opportunities, and selectively become an early adopter for high priority, high potential gain areas, putting into practice a real time enterprise (RTE).

ICT and digital government effectiveness and maturity

Fully implement effective and mature digital government within Michigan's public sector, shifting from access and interaction to engagement and participation. Achieve full maturity in digital government and ICT management and capabilities, including information, communications, and technology resources and services management.

- **Mature digital government strategies:** Develop goals and strategies for bringing digital government to full maturity by 2010.
- **Global standards**: Review, test and apply the Information Technology Infrastructure Library (ITIL) practices and standards in the areas of support service, service management, delivery, infrastructure, application, security and project management.
- **Cross-boundary and service enabling enterprise architecture and guiding principles:** Develop a robust enterprise architecture and standards capable of supporting cross-boundary, partnered relationships – incorporating technology, business, service (SOA) and performance provisions – supplemented and supported by guiding principles that are an integral and enforced part of the planning, project design and selection, budgeting and procurement processes.
- **Investment management and funding model:** Advance IT investment management capabilities and maturity (GAO - ITIM) by a planned shift from building the investment foundation to developing an investment folio, improving the investment process, and leveraging for strategic outcomes. Develop a more flexible funding and resource allocation mechanism, including for capital outlay and investments, innovations, enterprise solutions and sharing of resources.
- **Accountability and performance management:** Strengthen accountability, performance and outcome management, including the use of information, cost data and metrics in decision-making and resource allocation. Integrate the requirements for agency, IT strategic and cabinet action plans as well as for relationships for third party public and private sector service providers.

Use Information, Communications, Technology and Process Redesign to Transform Government Goals and Desired Outcomes

(Including governance and participation, decision-making and business processes, quality and variety of services, and collaborative relationships)

Government transformation goals and desired outcomes

Develop a government transformation goal framework and align the goals, strategies and desired outcomes with the Cabinet, Information Technology Strategic, and Agency Services plans.

- **Strategies for transformed government:** Develop goals and strategies to evolve digital government to transformed government.
- **2006 – 2009 government transformation initiatives:** Identify and prioritize the government infusion and transformation capabilities and Michigan opportunities available through information, communications and technology,

including as drivers and transformers of business processes, governance and decision-making. Incorporate transformation initiatives in the 2006 – 2009 IT Strategic and Cabinet Action Plans, with a minimum of one new initiative in each goal area.

- **Networked government:** Develop a policy and conceptual framework for transitioning digital government to a networked government. Networked government is characterized by a high level of public–private collaboration, use of third party service delivery and facilitation relationships, and joined-up relations with other levels and peer governments. These networked relationships are enabled trough technology and provide citizens with broader, improved and qualitatively different choice of services.

Expanded breadth and depth of cross-boundary issue engagement and collaborative relationships

Expand the range of public-public and public-private sector collaborative relationships within the state, nationally and globally. Collaboration includes shared services, work and workers, resources and infrastructure, and information and knowledge, including advisory support and participation in planning.

- **Global perspective and relationships:** Develop and utilize a formal global issue assessment, policy and operational perspective in recognizing collaborative opportunities as well as competitive relationships. Issues to be addressed include the state brand, competitive opportunities, sourcing policy options, workforce development, and communications capabilities.
- **Local, at-home capabilities and opportunities:** Support and enable local, sub-state economic development opportunities through network and virtual co-location technologies and in-sourcing policies in dealing with global and local partners and customers.

Values and public outcomes

Ensure that sound public policy values are supported and infused into a transformed government and result in desirable outcomes. Such values include access, transparency, inclusion and participation, accountability and performance.

- **Transparency and accountability:** Ensure that Michigan government is accessible and transparent and that information on governance and government performance is available in a timely and convenient manner.
- **Inclusiveness and e – citizenship:** Ensure that Michigan citizens can participate in governance and that Michigan has state-of-art e-citizenship capabilities.

Infusion Strategy Matrix (Representative Strategies and Initiatives)

The infusion strategy matrix crosswalks representative transfusion strategies and initiatives each of the three goal areas to the Cabinet Action, IT Strategic and Agency Services Plans.

	Representative Strategies and Initiatives		
Bridge and Infusion Strategies	**Cabinet Action Plan**	**State IT Strategic Plan**	**Agency Services Plan**
Information, Knowledge Management, and Intellectual Capital			
Information and Knowledge Management	- Economy: Sustain and create business investment and jobs in Michigan - Education: Higher education, research and development, lifelong learning	- Information sharing EA capabilities (architecture and standards) - Information service collaborative relationships	- Data integration / sharing - Become a business process repository
Communications: Information and Intellectual Capital as Communications Destinations	- Network connectivity (high speed Internet) - Education: lifelong learning - Economy: Cultural tourism	Goal one: Expand MI services to reach anyone, anytime from anywhere	- Citizen transactions - Collaboration tools - Shared administrative services
IT Professional Roles, Knowledge Workers and Intellectual Capital	- IT profession transformation	Goal four: Make MI a "great workplace" and employer of choice for technology professionals	- Become business process repository - Standardized tools, staff skills and architecture
Signature, Leveraged Information Solutions	- Smart , digital cities and communities - Economy: Continue to grow Michigan core communities as diverse, safe and healthy talent centers	Goal five: Innovative partnership programs	- Innovative partnership programs - Seven solution clusters

Innovation and Digital Government Maturity

Innovative Processes, Solutions and Technologies	- Independent standards of excellence (better government) - Collaborative information, technology and science solutions - Economy: increase non-auto related jobs	- Independent standards of excellence; target best practices and innovations (Goal three: Manage technology to provide better service and faster delivery) - Innovative partnerships in education, environment, human services, economy, better government and homeland security (Goal five: Community partnerships)	- Transform government service through IT innovation and business process redesign - Drive IT innovation by committing to on-going research into future tools and platforms - Independent standards of excellence (develop ourselves into a world class organization)
Technology Management and Leading Edge Solutions	Provide ICT support for Cabinet Plan and statewide issues; signature ICT initiatives (support selected strategies in all goal areas)	- Integrated, formal technology planning and management (optimally utilize technology resources) - Signature ICT initiatives	- Transform government service through IT innovation and business process redesign - Integrated, formal technology planning and management (support seven solution clusters) - Signature ICT initiatives: support the priorities of the governor and state agencies by delivering on strategic IT projects

Digital Government Maturity	- Global standards (better government: cut red tape in state government by streamlining services and implementing innovative technology to reduce time, mistakes and costs) - Make government in Michigan more cost effective and efficient	- Mature digital government strategies (transform MI services through sharing and collaboration) - Global standards - Cross-boundary and service EA (consistent architecture and standards) - Investment management and funding model - Accountability and performance management (business case solutions)	- Transform government service through IT innovation and business process redesign - Global standards (develop ourselves into a world class organization: budget and operational alignment, service delivery model, standardized processes) - Standardized tools, staff skills and architecture - Integrated infrastructure - Collaborative tools - Shared administrative services